

T H E
CRITICAL REVIEW.

For M A Y, 1788.

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A Pologies by those whose toil is incessant, and increasing, must be endless: let us then resume our account of this volume, by premising, that our delay is neither owing to inattention, or to disrespect; it is owing rather to numerous authors, each pressing to be heard; to narrow, unexpanded limits.

Article XXI. An Experiment to determine the Effect of extirpating one Ovarium upon the Number of Young produced. By John Hunter, Esq. F.R.S.—This is a single experiment only; and it cannot be decisive, unless it be ascertained that greater difference is not observed in two perfect swine. The spayed sow, however, neither bred so long, nor brought so many pigs, in an equal number of farrows, as the perfect one. In the first eight litters, the numbers were as 76 to 87. The perfect animal in eight additional farrows, brought 76 pigs; so that, in the whole, she brought ten more than double the number produced by the mutilated one. If we examine the question by analogy, it will appear probable, that two ovaria are provided, because one may be diseased; and that one decays sooner than the other. This may account for the early cessation of breeding; but the difference in the number of young ones, in the former litters, is probably accidental, unless we suppose the general health of the sow affected by the operation.

Art. XXII. Experiments made to determine the positive and relative Quantities of Moisture absorbed from the Atmosphere by various substances, under similar circumstances. By sir Benj. Thompson, F.R.S.—In these experiments, the quantity of fluid absorbed was greatest in the first instance, and lessened progressively in the following order: sheep's wool, beaver's fur, the fur of a Russian hare, eider down, silk, linen, and cotton wool. Raw silk and fine linen were more powerful absorbers than either material, when it had been previously

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manufactured. Sir Benjamin Thompson very properly attributes the different effects excited from these different substances, when worn next the skin, to their absorbing power; the one feels warm, because the moisture is immediately absorbed; the other cold and moist, since it remains uncombined with the substance in contact with the source of the fluid. The power of woollen, in promoting perspiration, depends on the same principle, rather than the warmth.

Art. XXIII. The Principles and Illustration of an advantageous Method of arranging the differences of logarithms, on Lines graduated for the purpose of Computation. By William Nicholson.—This is a series of computation, and of descriptions illustrated by diagrams. The scale is similar to Gunter's, or a circular one, compounded of Gunter's scale, and a sector; and this improvement promises to be convenient as well as useful.

Art. XXIV. Observations tending to shew that the Wolf, Jackall, and Dog, are all of the same species. By John Hunter, Esq. F. R. S.—Though Buffon contended that the wolf and the dog would not breed together, yet there are actual instances that the contrary is true, and that the progeny is prolific. Mr. Hunter has collected several of these instances; but we are not certain of the truth of his inferences, that they are of the same species. It is probable only, that they are of a similar kind, for the instances are taken from confined animals; and the final cause can have no influence in the argument, since the copulation would probably never have taken place in a state of nature, and of course the world could not readily have been peopled with monsters. The jackall is undoubtedly similar to both the wolf and dog: and if we can allow that 'the dog is a wolf tamed,' it may be admitted, that 'the jackall may probably be the dog returned to his wild state.'

Art. XXV. Experiments on the Congelation of the Vitriolic Acid. By James Keir, Esq. F. R. S.—Mr. Keir thinks, that vitriolic acid, of a certain strength, may be frozen by a degree of cold equal to about 45° of Fahrenheit's scale, and that this strength is 1780, at a medium, while water is supposed to be 1000. Acids of the strength of 1750 to 1814 freeze with greater cold; but, from 1846 to 1551, no congelation takes place in any degree of artificial cold. The acid, in freezing, remains some time fluid, like water; its heat is stationary; or, when cooled too much, the heat is also increased at the moment of concreting; but the ice is heavier than the strongest acid. As the strong oil of vitriol attracts water from the air, and in this operation produces heat, it is, indeed,

indeed, probable, that the freezing should be at that point where the power of attraction is so weak as not to excite heat. Indeed, the acid, of which the ice is composed, when separated and thawed, appears to be of the strength of easiest freezing; and our author's argument against this cause of the easiest freezing, is not conclusive.—Yet, on the whole, we think there may be some other cause of the acid freezing at this determined point, or near it. The congelation was first observed in the smoaking acid taken from martial vitriol; and we have now abundant reason to suspect, that acids drawn from metallic salts have peculiar properties: this consideration led us formerly to remark that, in count Lauraguais' experiment, the concretion might be owing to a combination of some other body. We must, however, observe, that Mr. Keir's experiments are confirmed by some late ones of M. Chaptal, a manufacturer of oil of vitriol, in France. His saleable oil is, however, 66, and the congealable oil 63: our saleable oil is 1846.—If, therefore, we say $66 : 63 :: 1846 : 1762$, we shall find the strength of the congealable oil in France somewhat lower than our author found it. In M. Chaptal's experiments it was congealed at -3 to -1 of Fahrenheit, considerably *below* the freezing point. It would be too long to engage in a detail of his experiments: we hope to do it very soon, and that we may even find room for it in this month's Intelligence.

Art. XXVI. An Account of some new Experiments on the Production of artificial Cold. By Tho. Beddoes, M. D.—Dr. Beddoes describes the experiments of Mr. Walker, apothecary to the Ratcliff infirmary. By adding, successively, sal ammoniac, nitre, and Glauber's salts, while they held the water of crystallization, to water, this gentleman sunk the thermometer 46 degrees. By employing materials, previously cooled, the diminution of heat was more considerable: by adding cooled materials to cooled diluted spirit of wine, the thermometer was sunk to -4 . Sal ammoniac, added to diluted spirit of nitre, described by Mr. Cavendish, at -3 , sunk the thermometer to -15 . Nitrous acid, poured on Glauber's salt, (in crystals, we presume), produced nearly the effects which it would have had on pounded ice; while the cold is rendered still more intense, by adding sal ammoniac, in powder, to the mixture.—The proportion of the ingredients is the following: of concentrated nitrous acid 12 ounces, of water 6 ounces: these materials must be cooled to the temperature of the atmosphere; and to them must be added a pound and a half (averdupois) of Glauber's salt, and of sal ammoniac 12 ounces. In this way the thermometer was sunk full 60° ; and, in

another instance, 68° . By dividing the experiment into different parts, and successively cooling the materials, Mr. Walker froze mercury, without a particle of ice and snow, when the heat of the air was at 45 ; a fact almost beyond the reach of belief. Oil of vitriol, diluted with an equal weight of water, joined with Glauber's salt, produces about 46° of cold. If therefore, in summer, the water from a deep well is at 52 , in this cheap and easy way it may be brought down to 12° ; and wine, placed in it, would be chilled. A curious fact occurred in these experiments: in trying a mixture of two parts of oil of vitriol, and one of water, with the Glauber's salt at the temperature of 35 , the mixture appeared to be frozen; and the thermometer was stationary. This must have happened from the crystallization of the salt, for the strength of the oil was below the point of easiest freezing. It was plain that some heat was produced, for the thermometer was stationary; and the heat, at the end of the experiment, not so great as was expected. The cold produced, Dr. Beddoes thinks, is in consequence of the water of crystallization from a solid becoming again fluid.

Art. XXVII. An Account of a Doubler of Electricity; or a Machine by which the least conceivable Quantity of positive or negative Electricity may be continually doubled, till it becomes perceptible by common Electrometers, or visible in Sparks. By the rev. Abraham Bennet, A.M.—This article contains an account of an ingenious method of rendering small quantities of electrical fluid, in the air, sensible. The small quantity, collected by a burning torch, a lanthorn, or even an insulated umbrella, by this doubler, became very sensible. A journal is added of the electrical state of the air, from the 23d of January to the 2d of March: in general, the electricity was positive, except in rain; it was then universally negative, if we except the rain which arises from the accumulation of water in mists, and is formed from the coalescence of its particles. As the drops depend on a very different cause in this state of the air from that which produces rain in the usual form, they cannot be expected to be followed by a change of electricity. The negative electricity seems to be connected with southerly winds, because they are connected with rain: when the rain occurred, as it did in two instances, with the wind from the north-west and the west, the electricity was still negative. We hope these observations will be pursued with care.

Art. XXVIII. Some Particulars relative to the Production of Borax. By William Blane, Esq.—

Art. XXIX. A Letter from Father Joseph da Ravato, Prefect of the Mission in Thibet, containing some Observations relative

relative to Borax.—These accounts seem to meet only in one point; that borax is a natural, not an artificial production. In the first, snow is said to be requisite to the operation, and the snow is mixed, for this purpose, with the hot water of the lake: in the second, the borax is said to be procured from rain: both accounts agree in the circumstance that salt mines are in the neighbourhood of the borax pits. The salt is covered with oil or butter, to prevent its deliquescence. It is brought from Jumlate, a kingdom in the northern mountains, thirty days journey north from Betowle, which is 200 miles N. E. of Lucknow. Lucknow is, however, about 600 miles N. W. of Calcutta; so that the real distance of the kingdom of Jumlate is increased by this mode of computation. The country cannot be found in the maps; yet, if it is in Thibet, it cannot exceed the 35th degree of north latitude. There are many pits of borax, to which the salt is brought by springs; the hot springs, in the first narrative, dissolve it probably in large quantities, and the snow may be necessary to cool the water, in order that the salt may crystallize; while, in the second account, if by rain water is understood the rain collected in falling from the neighbouring hills, the evaporation by the sun is sufficient to exhale the superfluous fluid. The 29th article is in Italian, but it is translated very accurately at the end. The history of borax is an object of commerce, and, as a chemical agent, is very curious and interesting, particularly as it lies scattered in various authors, and has never been collected.

Art. XXX. Sur les Gas Hépatiques: par Mons. Hassenfratz. On Hepatic Air: by M. Hassenfratz.—Mr. Kirwan taught us that hepatic air was only sulphur in an aerial state; but M. Hassenfratz found that he could hepaticize many different kinds of air, and that the hepatic gas was only sulphurated air of different kinds. M. Mongez had already made sulphurated fixed air: M. Hassenfratz sulphurated also nitrous air, atmospherical mephitic, vital, and atmospherical air. What has been called hepatic gas was the inflammable air sulphurated.

Art. XXXI. Botanical Description of the Benjamin Tree of Sumatra. By Jonas Dryander, M. A.—It is somewhat remarkable, that this tree should have been so often mistaken; Ray looked for the origin of an East Indian drug in a Virginian plant: it was then a laurus. Linnæus thought it belonged to the croton; and the croton benzoe stood in one mantissa, and the thirteenth edition of the *Systema Vegetabilium*, p. 721. In the *Supplementum Plantarum*, it was a species of terminalia, ascertained only by the similar appear-

ance of the barks of these trees (434). Mr. Marsden gave a better account of it; but Houttuyn brought it back again to a laurus (Act. Harlem, vol. xxi. p. 265.) It is now pretty distinctly ascertained, from a dried specimen, to be a species of styrax. A good outline of its habit and appearance is subjoined in a plate.

Art. XXXII. An Account of an Experiment on Heat. By George Fordyce, M. D. F. R. S.—This is an experiment on the communication of heat. We do not well know for what purpose it was tried, or what good consequence will follow from it. The fact is, that iron will communicate heat not so fast, at first, as air; but afterwards faster, and in greater quantities. Surely it was well known, that air was a bad conductor of heat: Dr. Fordyce might have learned it from his own experiments in a heated room. In the *horizontal part* of the chimney of a reverberatory furnace he could not expect to find any very great heat.

Art. XXXIII. An Account of an Observation of the Right Ascension and Declination of Mercury out of the Meridian, near his greatest Elongation, Sept. 1786. By Mr. John Smeaton, F. R. S.—It is not easy to abridge a series of observations and calculations; the result was, that on the 23d of September, 1786, A. M. at $5^h 22' 35''$ mean time, Mercury's right ascension was $163^{\circ} 59' 21''$, and his declination $7^{\circ} 44' 25''$ north.

Art. XXXIV. A remarkable Case of numerous Births, with Observations. By Maxwell Garthshore, M. D. F. R. S. and A. S.—The case before us is a well authenticated one of five female children at a birth. The woman had been delivered of a single child before; and the husband had been in an infirm state for some years, and was, at the time of this prolific birth, dying in a confirmed phthisis; two of the children were born alive, and the whole number were born within fifty minutes. Dr. Garthshore adds some reflections on numerous births. In the British lying-in hospitals, the proportion of twins has been 91 births in 18,300 deliveries. In the Westminster dispensary, of 1897 women delivered, the proportion has been one in 80. But in the Dublin lying-in hospital, it has been one in 62; the average in these kingdoms is 1 in 78. The proportion of twins to single children, in Germany, is from about 1 in 65, to 1 in 70; in Paris, about one in 96. The general average is about one in 80. In this variety there is some order; but in triplets, quadruplets, and quintuplets, there is no consistency, all seems to be accidental. In one instance, at Paris, where a woman had three children, the husband was a painter, and had been paralytic two years previous to the birth,

birth, without any reason to suspect the wife. We congratulate Mr. Hull's patient on the lucky coincidence.

Art. XXXV. *Chloranthus*, a new Genus of Plants, described by Olof Swartz, M. D.—This is a new genus, and the trivial name of the individual is 'inconspicuus' from the smallness of the flower. It is a Chinese plant, neither beautiful nor useful: it may be arranged in the forty-eighth natural order, next to the *viscum*. The description is illustrated by a plate.

Art. XXXVI. On the Precession of the Equinoxes. By the rev. Samuel Vince, M. A. F. R. S.—Sir Isaac Newton, while he assigned the true cause of the precession of the equinoxes, was less exact in his calculation of the effect. The present investigation is neat and simple:—the precession is, however, $21'' 6''$ in a year, from calculation; but, as it must suppose the earth of an uniform density, and assumes the proportion of the equatorial and polar diameters as fixed, it must probably deviate somewhat from the fact.

Art. XXXVII. Abstract of a Register of the Barometer, Thermometer, and Rain, at Lyndon, in Rutland, in 1786, By Thomas Barker, Esq. Also of the Rain at South Lambeth, in Surrey; and at Selbourn and Fyfield, Hampshire.—This register of the year 1786, is said to have been read in June 1786, by mistake we suppose, for 1787.—The range of the thermometer was from $80\frac{1}{2}$ to $11\frac{1}{2}$, a greater variation than commonly happens. The barometer varied from 30.05 inches to 29.01, for we must suppose the 20.01 in August to be meant for 29.01. Two errors in numerals, in a register of one page, is an unpardonable fault. The rain at Lyndon, in this year, was 27.289 inches; at South Lambeth 22.43; at Selbourn 39.57; at Fyfield 29.60; on an average 29.72.

Art. XXXVIII. Observations on the Structure and Oeconomy of Whales. By John Hunter, Esq. F. R. S.—Anatomical description is little suited either for an extract or an abridgment. We may observe, in general, that the very particular and extensive account of animals, which can seldom be the objects of the anatomist's attention, does the highest credit to Mr. Hunter, while the confused inaccuracy of the language disgraces the philosopher, and the collection in which his description appears. It is out of our power, as we have observed, to follow our author's steps; but we shall select a few passages, which we think are particularly curious. The species examined are the *delphinus phocaena*, or porpoise; the *grampus*; the *delphinus delphis*, or bottle-nosed whale; the *balæna rostrata*; the *balæna mysticetus*, or the whalebone-whale; the *physeter macrocephalus*, or the spermaceti whale;

and the monodon monoceros, or the narwhale. In general, the tail is flattened horizontally, to enable the fish to rise, in order to breathe; the flesh is very red, and of greater specific gravity than beef, so that the large quantities of fat are a necessary part of its œconomy. The bones are semitransparent, as in all fish; and those of the fins are somewhat similar to the bones of the superior extremities in man. Linnæus is not, therefore, so erroneous in classing whales with men, as has been imagined: they are at least the primates of the sea.

‘What is called spermaceti is found every where in the body in small quantity, mixed with the common fat of the animal, bearing a very small proportion to the other fat. In the head it is the reverse, for there the quantity of spermaceti is large when compared to that of the oil, although they are mixed, as in the other parts of the body.

‘As the spermaceti is found in the largest quantity in the head, and in what would appear, on a slight view, to be the cavity of the skull, from a peculiarity in the shape of that bone, it has been imagined by some to be the brain.

‘These two kinds of fat in the head are contained in cells, or cellular membrane, in the same manner as the fat in other animals; but besides the common cells there are larger ones, or ligamentous partitions going across, the better to support the vast load of oil, of which the bulk of the head is principally made up.

‘There are two places in the head where this oil lies; these are situated along its upper and lower part: between them pass the nostrils, and a vast number of tendons going to the nose and different parts of the head.

‘The purest spermaceti is contained in the smallest and least ligamentous cells: it lies above the nostril, all along the upper part of the head, immediately under the skin, and common adipose membrane. These cells resemble those which contain the common fat in the other parts of the body nearest the skin. That which lies above the roof of the mouth, or between it and the nostril, is more intermixed with a ligamentous cellular membrane, and lies in chambers whose partitions are perpendicular. These chambers are smaller the nearer to the nose; becoming larger and larger towards the back part of the head, where the spermaceti is more pure.

‘This spermaceti, when extracted cold, has a good deal the appearance of the internal structure of a water melon, and is found in rather solid lumps.’

The following remarks are curious in many respects.

‘Although this tribe cannot be said to ruminate, yet in the number of stomachs they come nearest to that order; but here I suspect that the order of digestion is in some degree inverted. In both the ruminants and this tribe, I think it must be allowed that the first stomach is a reservoir. In the ruminants the
precise

precise use of the second and third stomachs is perhaps not known; but digestion is certainly carried on in the fourth; while in this tribe, I imagine digestion is performed in the second, and the use of the third and fourth is not exactly ascertained.

‘The cœcum and colon do not assist in pointing out the nature of the food, and mode of digestion in this tribe. The porpoise, which has teeth, and four cavities to the stomach, has no cœcum, similar to some land animals, as the bear, badger, racoon, ferret, polecat, &c. neither has the bottle-nose a cœcum, which has only two small teeth in the lower jaw; and the piked whale, which has no teeth, has a cœcum, almost exactly like the lion, which has teeth and a very different kind of stomach.

‘The food of the whole of this tribe, I believe, is fish; probably each may have a particular kind, of which it is fondest, yet does not refuse a variety. In the stomach of the large bottle-nose, I found the beaks of some hundreds of cuttle-fish. In the grampus I found the tail of a porpoise; so that they eat their own genus. In the stomach of the piked whale, I found the bones of different fish, but particularly those of the dog-fish.’

The structure of many parts, particularly of the lymphatics, might probably be ascertained in animals so large, though it is uncertain in the human species. The aorta of a spermaceti whale is a foot in diameter; and this vessel, with the heart, fills a large tub. The nervous system appears pretty decidedly fibrous; the fibres pass *from* the ventricles, as from a centre, to the circumference; and the fibrous texture is conspicuous in the cortical part. In some kinds, particularly the porpoise, the brain is very large in proportion to the animal. The organ of smell is out of the direct road of the current of air in inspiration, and out of the current of water when the animal discharges it by spouting. As these fish have olfactory nerves, they certainly have the power of smelling; but through what medium it is exercised is uncertain. Mr. Hunter suspects that the sinus, on which the olfactory nerves are dispersed, contains air, and, as the water passes by it in the act of spouting, the reservoir of air is impregnated by its effluvia.

This account is illustrated by several plates; but the different parts which are described, are not particularly delineated.

Art. XXXIX. Some Observations on ancient Inks, with the Proposal of a new Method for recovering the Legibility of decayed Writings. By Charles Blagden, M. D. Sec. R. S. and F. A. S.—On examination, the ancient inks appear to have been made on the same principle as the modern ones. The method of restoring them most effectually, was to moisten the paper with a diluted mineral acid, and then to add a phlogisticated

gisticated alkali, which gave the letters a bright blue colour. This method is subject to some inconveniencies; and it is less useful, because it seems to require, that the form of the letters should be previously known; of course it cannot be employed to render the letters of illegible manuscripts conspicuous. If the astringent principle of galls cannot be separated from the staining matter, we would recommend preparing the phlogisticated alkali from the Prussian blue, when it is very slightly coloured, and exposing the writing afterwards to the vitriolic acid, in the state of air.

The volume concludes with the usual list of donors and their presents. In the Appendix is a supplement to major-general Roy's mode of determining the relative situation of the royal observatories of Greenwich and Paris. It points out the source of some little inaccuracies in calculation of M. Bouguer, and a supplementary table for the degrees of the earth, is subjoined.

The Philosophical and Mathematical Commentaries of Proclus; surnamed Plato's Successor, on the first Book of Euclid's Elements. And his Life by Marinus. Translated from the Greek. With a preliminary Dissertation on the Platonic Doctrine of Ideas, &c. By Thomas Taylor, Vol. I. 4to. 15s. in Boards. Payne and Son.

OF Mr. Taylor's peculiar mode of thinking we have before taken notice; it appears more striking than ever in the present work, which is dedicated to 'the sacred Majesty of Truth!' If the sceptic should wish to know 'what is truth,' he will receive a very unexpected, and we apprehend, a very unsatisfactory answer. It is to be found, according to Mr. Taylor, in * judicial astrology, and the ancient Pagan theology. The reader may smile, but he very seriously assures us, in the catalogue which he gives of Proclus's writings, that had 'his Commentary on the Gods of Homer been preserved,

* This appears in a note annexed to a passage in the Life of Proclus (p. 30.), translated, so Mr. Taylor says, from that written by Marinus, one of his disciples. In commenting on the passage he tells us, that 'such is the admirable order and connection of things, that throughout the universe, one thing is signified by another, and wholes are after a manner contained in their parts.' The observation is annexed to a scheme of the situation of the stars when Proclus was born; no doubt, *clearly significant of his philosophic eminence!* We know not where Mr. Taylor derived this intelligence. The Life of Proclus, written by Marinus, and prefixed to his Commentaries on Plato's Theology, as published at Hamburgh in 1518, is, indeed, rendered with accuracy and elegance; but nearly half of it, as it stands in this publication, the scheme of his nativity, among other things, is added either from Mr. Taylor's fancy, or some authority with which he does not think proper to acquaint us.

we should doubtless have been furnished with a defence of the Heathen religion which would have silenced the ignorant clamours of its opponents!

We recollect having read, in Brydone's *Travels*, an account of an old humorist, who was a staunch Whig, and resided at Rome. Being laughed at by some Jacobite gentlemen for pulling off his hat to the statue of Jupiter, he replied, that he observed they constantly did the same to the Pretender; that he wished to keep on good terms with Jupiter for the same reason as they did with him; apprehending that the former was more likely, in the course of time, to be restored to his ancient honours than the latter. Little, however, we trust, did he suspect that the æra was so speedily approaching, in which a man of learning and abilities would meditate a restoration of the Olympic deities, and lament the degeneracy of modern times, as ill adapted to so notable a project, and so pure a creed; for though the following note, which will give us a curious specimen of Mr. Taylor's peculiarity, expresses a disapprobation of the national mode of worship, as exercised by the ancients; yet the text, which he so highly praises, contains an account of Proclus's composing hymns on the divinities of Greece, and other nations, performing devotional rites in honour of them, and conforming to the most glaring absurdities of the heathen system.

'A genuine modern will doubtless consider the whole of Proclus's religious conduct as ridiculously superstitious. And so, indeed, at first sight, it appears; but he who has penetrated the depths of ancient wisdom, will find in it more than meets the vulgar ear. The religion of the Heathens has, indeed, for many centuries, been the object of ridicule and contempt: yet the author of the present work is not ashamed to own, that he is a perfect convert to it in every particular, so far as it was understood and illustrated by the Pythagoric and Platonic philosophers. Indeed the theology of the ancient, as well as of the modern vulgar, was no doubt full of absurdity; but that of the ancient philosophers, appears to be worthy of the highest commendations, and the most assiduous cultivation. However, the present prevailing opinions, forbid the defence of such a system; for this must be the business of a more enlightened and philosophic age. Besides, the author is not forgetful of Porphyry's destiny, whose polemical writings were suppressed by the decrees of emperors; and whose arguments in defence of his religion were so very futile and easy of solution, that, as St. Hierom informs us, in his preface on Daniel, Eusebius answered him in twenty-five, and Apollinaris in thirty volumes!'

Such opinions deserve no serious confutation; they are too absurd to be dangerous.

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We might quote other passages of the same tendency as the foregoing; but the reader, we apprehend, will excuse us, if we proceed to give a summary account of what is contained in this very extraordinary performance.

We have first a dissertation on the Platonic doctrine of ideas, in which their nature is investigated, and reality supported. Plato was not, however, the inventor, though a strenuous assertor of ideas. Pythagoras, in his obscure manner, signified them by numbers; and Orpheus, prior to him, maintained their reality, and styled Jupiter, or the demiurgus of the world, 'the idea of all things.' The mystic qualities and attributes of the Pythagoric numbers (in the exact knowledge of which he supposed man's ultimate good to consist) are amply and curiously descanted on. For the farther unravelling this intricate maze, we are referred to 'Proclus's commentary on Plato's theology, and to the works of the great Plotinus, who will lead them into the penetralia of the most recondite wisdom.' These sublime truths are not, we are told, adapted, like modern publications, to the *meanest capacities*. The mode in which Plato expressed himself, occupied in abstract speculation on the subject, will possibly lead the reader to suspect that it is not comprehensible by any capacity.

'For a thing of this kind (says he) cannot be expressed by words, like other disciplines, but by a lasting familiarity and conjunction of life, with this divine object, a bright light on a sudden, as it were leaping from a fire, will illuminate the soul and there preserve and nourish its splendor.'

To Mr. Taylor, however, the matter appears quite clear and obvious.

'This bright light (says he) is no other than that of ideas themselves; which, when it is once enkindled, or rather rekindled in the soul, becomes the general standard, and criterion of truth. He who possesses this, is no longer the slave of opinion; puzzled with doubts, and lost in the uncertainties of conjecture. Here the fountain of evidence is alone to be found. — This is the true light, whose splendors can alone dispel the darkness of ignorance, and procure for the soul undecaying good, and substantial felicity. Of this I am certain, from my own experience; and happy is he who acquires this invaluable treasure. But let the reader beware of mixing the extravagancies of modern enthusiasm with this exalted illumination. For this light is alone brought into the mind by science, patient reflection, and unwearied meditation: it is not produced by any violent agitation of spirits, or extasy of imagination; for it is far superior to the energies of these: but it is tranquil and steady, intellectual and divine. Avicenna, the Arabian, was well acquainted with this light, as is evident from the beautiful description he gives of it, in the elegant introduction of Ebn

Tophail,

Tophail, to the Life of Hai Ebn Yokdhan. "When a man's desires (says he) are considerably elevated, and he is competently well exercised in these speculations, there will appear to him some small glimmerings of the truth, as it were flashes of lightning, very delightful, which just shine upon him, and then become extinct. Then the more he exercises himself, the oftener will he perceive them, till at last he will become so well acquainted with them, that they will occur to him spontaneously, without any exercise at all; and then as soon as he perceives any thing, he applies himself to the divine essence, so as to retain some impression of it; then something occurs to him on a sudden, whereby he begins to discern the truth in every thing; till through frequent exercise he at last attains to a perfect tranquillity; and that which used to appear to him only by fits and starts, becomes habitual, and that which was only a glimmering before, a constant light; and he obtains a constant and steady knowlege." He who desires to know more concerning this, and a still brighter light, that arising from an union with the supreme, must consult the eighth book of Plotinus's fifth Ennead, and the seventh and ninth of the sixth, and his book on the Beautiful, of which I have published a translation.

This section concludes with a comparison between the ancient and modern philosophy, or rather the Platonic and Lockian system of ideas, in which the latter receives no quarter.—The next dissertation treats of the *properties of the demonstrative syllogism*, and is chiefly founded on the first book of Aristotle's last Analytics. Of the Logic of Aristotle we have but a few books left, and had they been entirely lost the world might, as some has thought, have done just as well without them. Mr. Taylor, however, has displayed great knowlege and acuteness in elucidating his subject; but this dissertation, like most of the others contained in this volume, cannot easily be abridged or analysed, without doing it injustice.

In the third section the nature of the soul, according to the Platonic philosophy, is considered: and in the fourth we have a discourse on the true end of geometry. This may be looked upon as a kind of introductory preface to the work itself, which treats not only on geometry, but mathematics in general, and leads us from the definitions of Euclid to the very height and depth of Platonic wisdom—or, perhaps, of Platonic reveries.

The profundity of Proclus, and the typographical errors of the Greek edition, prove no obstacles to our adventurous translator. He assures us that 'his version is every where faithful, and sufficiently perspicuous to those who are conversant in the ancient philosophy.' Dr. Cudworth, we find, rashly declared, that 'Proclus had some peculiar fancies and whims of his own,
and

and was indeed a confounder of the Platonic theology; and a mingler of much unintelligible stuff with it.' *This rouses Mr. Taylor's indignation:*

'I must confess (says he), and I am neither afraid nor ashamed of the declaration, that I never found any thing in Proclus, but what by patient thought, accompanied with a sincere and vehement thirst after truth, I have been able to fathom. Had Dr. Cudworth been endued with these requisites, he would doubtless have had equal success; but without them, the sublimest truths will certainly appear to be *unintelligible stuff*. Besides this consideration is not to be omitted, that a modern priest makes a bad philosopher.'

May they ever be distinct characters, and the meekness of Christian knowledge be ever opposite to the ostentatious display of worldly wisdom, or *vain philosophy!*

To those who understand the *constitution* of the Platonic figures, and the *immaterial* and *intellectual theorems* of Pythagoras, we recommend this work. We confess that 'we have not drank sufficiently deep of the Platonic stream,' greatly to relish it. Mr. Taylor, indeed, possesses a spirit entirely congenial to his original author, and appears to understand him where he is intelligible; and where he is not so, his fancy supplies the deficiency—to himself at least. The generality of readers will not easily comprehend either Proclus or his commentator.

An Attempt to translate and explain the difficult Passages in the Song of Deborah, with the Assistance of Kennicot's Collations, Rossi's Versions, and Critical Conjecture. By the Rev. Stephen Weston, B. D. 4to. 2s. Payne and Son.

THE author wishes, perhaps, to be known as an Hebrew scholar, and a reader of the different commentators. We allow his claim; but, if he aims at the title of an Hebrew critic, it cannot be built on this performance, for little is new, and the novelties are sometimes trifling, and often doubtful. This celebrated chapter has called forth the erudition of many a German commentator, whose dust has been shaken off to fill the present pamphlet. The Song is indeed worthy of the labour bestowed on it, though much has been bestowed in vain.

If we examine the tenor and object of this eulogetic hymn, it is, we find, to praise the Lord for the deliverance of Israel, to contrast the benefits derived from this deliverance with the former distresses of the country, and to enumerate the steps which led to that happy event. In the latter part, particularly, Deborah assumes all the importance of a deliverer, and relates, with great exultation, the circumstances which led to the death of Sisera. We will now examine the criticism, on these principles,

principles, and put Schurrer and Lette back on the shelf; nor will we once open Golius or Gjeunharius.

In the second verse, for 'the avenging of Israel,' Mr. Weston would read 'for the taking away of the veil that was in Israel.' The sense is the same, since in this Song, which is full of metaphor and allusion, the veil that overshadowed Israel must have been, as the translator is willing to allow, 'the terror of Sisera and Jabin.' The omission of the *vau*, in xiii. 20. of Ezekiel, seems to give some consistency to that unintelligible passage. The annotator, Mr. Weston, would read 'wherewith you hunt the souls of the young;' yet, in its present state, the passage can scarcely be said to be elucidated. In the seventh verse, for we can only notice what seems to be important, he translates 'the leaders ceased in Israel;' and, indeed, has shown, that if our version had said the *principal* inhabitants, it would have been correct. In this state, our translation is as near to the original as his own, for the term leaders does not express the extent of the desolation; the word implies a more considerable destruction, and is but partially expressed by the refinement of the translator.

In the eighth verse of the old translation, it is said, 'They have chosen new gods: then was war in the gates;'—their idolatry was punished by invasion and desolation, while resistance was out of their power, for they were without arms: 'was there a shield or spear seen among forty thousand in Israel?' But plain sense is not enough for a minute critic: let us attend to Mr. Weston.

'Of all the corruptions which design or accident have introduced into the Hebrew text, no one ever worked a greater change in the sense than the one I apprehend to have taken place in this verse. There is a very considerable variety of interpretation of these words, and yet no critic seems to have guessed at the true meaning, if there be any certainty in my conjecture. Kennicot gives the passage to Deborah, but as the thing appears to me, it belongs to Barak. Deborah tells us she, an inspired prophetess and judge in Israel, took the lead because the country was left without a general. Barak tells us that he was chosen immediately by God to conduct the war in his own country. Read

Barak.

יבחר אלהים
קדש ים

The Lord chose Kedesh of the West. Now we learn from the last chapter (c. iv. v. 5.) that Barak was called out of Kedesh; and that Barak called Zebulun and Naphtali to Kedesh, and went up from thence with his quota of men to mount Tabor.

* See chap. iii. and 4.

Kedesh of the west wants no explanation. Consult Jos. xix. 34. Exod. x. 19. xxvii. 12. Reland 697.

Unfortunately, in the former chapter, it is not the Lord, but Deborah, who called Barak; and if the Lord commanded, it was that 10,000 men should draw towards Mount Tabor, not that Barak should lead them.—But to go on:

* The seventh and eighth verses are thus to be distributed:

Verse 7. Deborah.—The leaders in Israel ceased;
They ceased till I Deborah arose,
Till I arose a mother in Israel.

Verse 8. Barak.—The Lord chose Kedesh of the west;
Then when war was at the gates,
Was there a shield or a spear seen,
Among forty thousand in Israel.

* The reason of this is evident from the history in the last chapter (c. iv.) Barak was gone to mount Tabor with all the troops he could collect, and all the arms. This mode of interpretation, if it be admitted, will confirm the history in the preceding chapter, and give a certain sense to what was before vague and undetermined.

This is a little extraordinary: when Barak went towards mount Tabor, war was *not* at the gates; and it is more so, that because 10,000 men were sent away, 40,000 should have no arms. Did not the annotator know, that while the Israelites were enslaved, they were disarmed? Were they not disarmed by the Philistines? (Sam. i. xiii. 19.) Were not their efforts and their deliverance at different times, exerted and perfected by the rudest weapons; a common knife, which Ehud himself made (Judges iii. 16), an ox goad (iii. 31.) with which Shamgar slew 600 Philistines? Yet we learn, from the verse in Samuel above mentioned, that at this time, not only the instruments were made, but even ground, by men whose occupation these employments exclusively were. We are indeed told, in the former chapter, that the host of Sisera fell on the edge of the sword; but the swords must have been few, when of 50,000 fighting men, 10,000 only could have been in any degree armed.

Instead of 'ye who sit in judgment' *ישבי על מדין* Mr. Weston would read *ישבי על כד*. The emendation may be admitted, though without any real advantage: we think it injures the sense, since the different classes are better discriminated in our version.

Our translation, in the next verse, by a bold, but happy interpolation, reads, '*They that are delivered* from the noise of the archers, &c.' carrying on the allusion from the nobles and the magistrates to the shepherds, who drew water securely. Mr. Weston, after Schurrer, repeats the last word, and translates,
'Declare

'Declare the-praise of the Lord'

Above the voice of the archers at the watering-places.'

The preposition will undoubtedly bear this interpretation; but the sense is neither clear or connected, from Mr. Weston's translation; and we should prefer the translation of the Bible, which is not without arguments to support it.

'They fought from heaven; the stars in their courses fought against Sisera.' This is the usual hyperbolical style, and means that all nature combined with the Israelites. Mr. Weston's emendation is of little importance: in his opposition to Lette, he seems to think, that no army can be conquered in the day-light. Military men, we believe, think otherwise.

'The river Kishon swept them away,'

'As their destruction was the river Kishon:—This is a neat, and, we think, a correct emendation.

'In a lordly dish she brought him *cream*.'

* חמאה thick milk, or cream. A כמא Arabicè Spissum fuit Lac. Cf. Simonis lexicon.' When we looked at the place where this Attempt was published, we were not at a loss to conceive the meaning of this passage, which we suppose was suggested while the author indulged himself in one of the luxuries of Devonshire, clotted cream. But we, who are at a distance from such repasts, must prefer the old interpretation, though not entirely that of our translation. The word means, undoubtedly, thick milk; but it is *new* milk, from which the cream has not been separated.

We shall add but one remark more: the interpretation of the word חמא is most extraordinary. Is this a word which a judge of Israel would put into the mouth of Sisera's mother, and her 'wise ladies,' at least with this interpretation? He is not, however, singular. A German commentator has not scrupled to translate it in the plainest terms (Crit. Sacr. vol. ii. p. 2022.) as plain as Horace uses, in the lines quoted by Mr. Weston,

'Nam fuit ante Helenam, &c.

But Horace, he says, meant the expression figuratively, as well as Barak, and he modestly throws an oriental veil over the word, so that Horace himself would not know it again. We wish that the author had taken Uncle Toby's advice,—
'wrapt it up and said nothing about it.' His judgment would have then done him as much credit as the most recondite knowledge of the subject can now possibly afford him.

Vol. LXV. May, 1788.

A a

On

On the first opening of this work, we began to wonder at the extent of the author's reading and learning: as we proceeded, we found that he was only to be wondered at from a distant view. He must not be approached; no rude hand must remove the *oriental veil*; for under it we shall find nothing but what is common and well known. We mention this to account for our freedom with him: when our veneration lessened, a little displeasure took its place. But extremes are always wrong; and, while we cease to venerate, we should pay our tribute of applause to the extent of Mr. Weston's reading, and his stock of oriental literature.

The New Pharmacopæia of the Royal College of Physicians of London. Translated into English, with Notes, Indexes of new Names, Preparations, &c. &c. By Thomas Healde, M. D. F. R. S. 8vo. 5s. in Boards. Longman.

AS we have given a pretty copious account of what the New Dispensatory contains, we now proceed to consider its merits, and the labours of the translator. To translate a work of so little difficulty as a system of prescriptions, which Dr. Healde assisted in forming, can confer but inconsiderable honour. Accuracy will scarcely deserve praise, while error is unpardonable. Of positive errors we cannot accuse our author. Perhaps his style might have been more neat, if he had not so studiously stept in the prints of the original. The notes contain some short pharmaceutical directions, or some explanation of the conduct of the committee appointed to reform the Dispensatory. They might have been more numerous, with advantage, as much information is still wanted, respecting the conduct of some of the processes, or the designs of the College. Yet we ought to be grateful for what they have condescended to reveal.

After a very careful examination of this work, we must allow it a considerable share of commendation. It is a neat, a simple, and, in many respects, a judicious set of formulæ. Fastidious criticism may, indeed, find much to blame; but the candid good-natured enquirer, who is aware of the great difficulty of the work, will forget little errors, when compared with numerous excellencies. The language, as will already have appeared, is that which Bergman borrowed from Morveau: the arrangement is very (perhaps too) strictly pharmaceutical; and the new formulæ are some of the most efficacious which private practice has adopted. We shall mention, however, some circumstances, in which we suspect the College have been too hasty, probably inconsiderate; and some sub-

stances which they have omitted: but we must examine the work in its order.

In the list of *materia medica* we cannot blame the College for not adding the Linnæan names of those medicines which have not been ascertained; but, as they have referred, for the botanical name of the lesser cardamoms, to Sonnerat's voyage, they might have referred to Ives, or to Rumphius, for the *columba*. It is, also, a little remarkable, if the species of *amomum* was so clearly characterised by Sonnerat, to induce the cautious College to refer to him, that Murray, in his 14th edition of the *Species Plantarum*, does not mention it.—The College's caution is peculiarly conspicuous in not putting down the botanical names of the *cascarilla*, the *gutta gamba*, *ipécacuanha*, *sanguis draconis*, and *terebinthina*. A common reader might suppose that these plants were as much unknown as those which produce the *kino*, *gum ammoniac*, and *sagapenum*. If they would not allow of the pretensions of the genera *croton*, *cambogia*, *psycotria*, *pterocarpus*, *pistacia*, or *pinus*, yet the characters of the authors who have decided on these subjects should have induced them to set down what they had observed, even if it had been distinguished by a note of interrogation. We believe that few genera are better ascertained than these neglected ones.—In the qualities of the medicine employed, there are some errors: *kino* is put down as a resin, though in its synonym it is styled a gum. The College, who ascertained it to be a resin, should have enquired into its nature. We found, that a tincture from it, in proof-spirit, would not turn milky on adding any proportion of water; so that, at best, it must have the largest proportion of gum. The *galbanum* they have called a gum resin; but we have invariably found, that rectified spirit would dissolve the whole, except impurities, while the proof-spirit, which the College employs, left a considerable residuum; the greatest part must, therefore, have been resin, and their formula for the tincture of *galbanum* is unnecessarily extravagant.

On the superfluities of the list of *materia medica* we shall make no remark: the excess will be attended with no great injury; and we have not observed any extraordinary defects. The *hyoscyamus* might perhaps have made an useful addition. But, while we mention plants of this class, it may be of importance to mention, that the *helleboraster*, if not carefully managed, may be injurious. There are two kinds of leaves of different strength, at once on the shrub; and if used in decoction, as is usual, deleterious effects are sometimes produced, by not attending to the leaf which is gathered. The safest way would have been to have ordered the younger and

older leaves to be mixed, dried, powdered together, and kept closely stopped in a phial. Other medicines may be properly kept in the same state, and the same manner.

In the preparation of simples there is one considerable error, viz. in preparing chalk, which, as it is a medicine often employed for young children, should have been guarded with an anxious caution. There is no rule for chusing the chalk; and this earth generally contains flints, and a little muriatic acid. If it were washed carefully after powdering, and the lightest parts only preserved for levigation, it would be a much safer medicine.

The conserves are in general well chosen, and properly prepared: we regret only, that the conserve of mint is omitted. We have often found it useful: the wormwood will scarcely supply its place. The inspissated juice of the elder berries might have been omitted, with little disadvantage to the work, or to the world: the inspissated juices which are added, will at least contribute to the elegance of prescriptions, if not to efficacy.

The new extracts are a considerable improvement, if we except the extract of broom-tops, a medicine which once owed its reputation to its alkali, when burned, and which ignorance alone could attribute to the plant in any other form. We have tried it in all its shapes, and find that, except in its ashes, there is no virtue. An extract of bark is undoubtedly useful; but two extracts are an useless superfluity: yet they remain in spite of what chemistry and experience have dictated. The subject lies in a small compass. The medical virtues of bark exist in a gummy resin; to extract it, either boiling water or proof-spirit are sufficient; if, in the first instance, the liquor is strained very hot.

In the list of oils we find an instance of the College's too strict adherence to their pharmaceutical arrangement. They, in effect, produce æther before it is expressly named; and the aromatic oil, their *ol. vini*, occurs at the end of a process, while there is no object for the beginning: this is sacrificing a natural method to a fancied order; but the fault is an immaterial one. The class of salts we have already praised; but we ought to add, that they are evidently defective from the omission of the *acidum tartari*. The distilled vinegar might have been thought too weak, if there had not been a stronger acid, which may occasionally be employed to strengthen it. We think that we should have preferred the terms of potassa and soda for the fixed alkalis, as they admit of being declined, and are therefore more properly Latin; and if, instead of *aqua*, the solution of any salt had been called *lixivium*, it would have avoided

avoided the ambiguity which may arise from the similar appellation of distilled waters, and have been more strictly chemical.

In modern practice, the metallic preparations are of considerable importance, and they have been much attended to by the college. They have done many things well; but not uniformly so. In the solutions of metals in acids there is a rule, which is pretty general, that the metal must be in different degrees calcined before it can be dissolved in the muriatic or vegetable acids. When dissolved in the other acids, and precipitated from them by the volatile or fixed alkalis, they are nearer or farther from a metallic state, and of course adapted for solution in different menstrua. This principle is not so closely followed as it ought to have been. Antimonium calcinatum, a calx of at least doubtful efficacy, should have been omitted. In particular situations it may become emetic by exposure to the air; but this fact renders it more uncertain. Dr. Healde contends for its efficacy; but, as he has not the clearest method of explaining himself, we shall extract his own words. Does he mean that the calx of 1741 is the same which he finds to be emetic at *present*; or because it happened to be so in 1741, it must be so now?

‘The translator hopes to be excused if he says, that he prepared the calx *lota* himself in 1741;—that he has ever since used it,—often designedly to excite nausea,—and continues deceived, if, when genuine, it is inefficacious. It is generally given in small doses, to promote a diaphoresis, from ten grains to a scruple.’

We ought to value this information, for on the subject of metallic preparations he is very cautious of saying any thing.—But when the College speak of a red heat, and burning the white matter *about* half an hour, we will defy any chemist to make it twice exactly of the same strength, and it might have been emetic in 1741, and useless in any other year. The crocus of antimony is a very uncertain preparation, and undoubtedly an improper one to make emetic tartar. We are told that chemists are not agreed about the *best* way; must therefore a *bad* one be retained? In fact, they *are* agreed, that to make it with the pulv. algaroth. is better than any other yet discovered; and, since it is now known, that butter of antimony can be made by distilling muriatic acid from manganese, into a receiver, in which crude antimony has been previously put, we combine a considerable degree of certainty with ease and cheapness. This process is explained in the History of the Royal Society of Edinburgh, prefixed to their Transactions, a work which contains much valuable information. Before we quit the subject of emetic tartar, we would

recommend powdering the crystals, and mixing them together; we know that different crystals, from the same process, are of unequal strength. The *vinum antimonii*, improperly separated, for the sake of strict pharmaceutical accuracy, from the other antimonials, is a very uncertain preparation, as the strength of white wine is not always the same: it is in the usual doses generally useless. Of the solution of emetic tartar in wine we cannot also speak favourably: of ten ounces two are of water: if the water is added hot, as the prescription seems to imply, the mixture will be in a few days sour; if cold, there will always be some deposition. In fact, formulæ of this kind belong to extemporaneous prescription. The *ferrum tartarizatum* is a preparation so rude and unchemical, that it disgraces the work. There are states in which iron may be dissolved by the acid of tartar; and if a preparation of this kind be wanted, it should have been employed. We believe, however, that it is wholly unnecessary, since the great advantage which arises from the solution of any metal in vegetable acid, is the rendering it more mild. But iron, even in the vitriolic acid, is not acrid. The wines and tinctures of iron are weak medicines; in strict accuracy, the *ferrum muriatum* should have been among the preparations of iron.

The mercurials afford a fruitful subject for remark: in general, however, the formulæ are sufficiently neat and accurate. We can mention only the most important ones. The corrosive sublimate, whose preparation we transcribed in our last Number, is that of Bolduc, with a little variation in the proportions, which we suspect renders it more mild. It undoubtedly should be prepared by our chemists, though there is in reality little reason to suspect its being sophisticated by arsenic. The reason for retaining calomel, with *mercurius muriatus mitis*, the calomel of Scheele, we shall transcribe from the translator, who, on this subject, is unusually clear.

‘This is the *mercurius dulcis præcipitatus* of the Pharm. Lond. fol. 1721. p. 145.—adopted by the Edinburgh, 1744, under the name of *Merc. præcip. albus*,—and, after that, by the Swedish Dispensatory, under the name of *mercurius dulcis*. As it has been supposed by many to be a new invention of Mr. Scheele, and been recommended as an easy and cheap substitute for calomel, it has grown pretty much into use; but the testimonies, before the committee, of its good effects not being consonant with each other, the college chose not to receive it instead of a medicine of such established character as calomel, and introduced this for future trial. It is given in doses similar to those of calomel.’

We have little to add to what we formerly said, on the subject of the other metals; yet we cannot help mentioning

two important omissions; the cuprum ammoniacale, and Plummer's pill, medicines of considerable efficacy, and very improper to be left to extemporaneous prescription. The blue vitriol will not supply the former; and no medicine in this volume will perform the office of the latter. 'The ancients were miserably occupied by the fear and the correction of poisons,' say the author and translator of the preface; but this miserable occupation is not lost, and we may quote from this new and improved edition, where intrepid and 'masculine' sentiments are said to prevail, the terrors of sophistication by arsenic, the omission of copper, and the great caution relating to the saccharum saturni *. A precipitate, by the volatile alkali may, perhaps, be thought wanting. We have never seen any great advantage from the use of Plenck's powder: on the contrary, it has appeared an inconvenient medicine; but, while it is often given, it should have found a place in the New Pharmacopœia. If a powder of this kind were precipitated by the volatile alkali from a solution of mercury, in the nitrous acid, as in the pulv. cinereus of the Edinburgh Dispensatory, it might have been a very proper medicine for the College's adoption.

Of distilled waters there are more than enough; but we ought to commend the terms and the accuracy with which they are employed in the distinction of what used to be called simple and spirituous. The spiritus distillati include every thing which rises in distillation, combined with alcohol. But many of the formulæ might have been expunged. We wish the affectation of using the singular number only had been avoided: decoct. rosæ is the decoction of *one* rose.

The decoctions also are too numerous, since many of them are the objects of extemporaneous prescriptions. Among the infusions is aq. calcis, added, perhaps, with pharmaceutical propriety, but in other views improperly. In reality, there should have been a class of terrea, where every preparation of earths, or which owe their activity to earth, might have been inserted: this class, in a pharmaceutical light, would not have been more improper than the salina and metallica. If the College would be strict, they should have been uniformly so. We are sorry to find the infus. senæ limoniatum wanting; an infusion of aloes, in lime-water, an useful preparation, might also have found its way into this edition.

* The translator, however, takes violent emetics: he took, 50 years ago, the corrosive sublimate for this purpose, and speaks, from his own experience, of the effects of turpeth mineral.

The tinctures are managed with sufficient clearness, and there is no want of various articles of this kind. The occurrence, however, of tinct. fuliginis, in the last edition, reminds us of taking leave of this useful medicine; we do it with regret: an extract of soot we have often used with great advantage, and think that many other tinctures might have been rejected with less injury. The tinct. flor. martialium and saturnina, we have used with beneficial effects. So far as the latter is a chalybeate, it may be supplied by the tinct. ferri muriati; but we are convinced, that it also contains lead; on that account, we suppose it useful: on that account the College may have rejected it—Doctors differ! The tinctures of columba, and of cascarilla, are useful additions.

The mixtures afford little room to remark: they contain some valuable preparations; but this class is made up with so little care, that Hoffman's anodyne liquor is near to lac ammoniac. ; and the compound spirit of ammonia, is joined with chalk, julep, and almond milk: nothing better could, indeed, be expected from a title so general, and so little discriminated. The syrups are unreasonably multiplied; we forgot to mention, in our last article, the syrups of mulberries, raspberries, and black currants. Among the oxymels, that of the meadow-saffron is a very useful addition.

Of the powders we can say little besides what occurs in our last article: they sometimes supply the place of pills and electuaries, forms to which our College seem to have an unreasonable aversion. What is, however, included under these titles are very proper, and furnish no opportunity for criticism. The improvement of the old philonium was, in some degree, done before by the college of Edinburgh, and we think done better. A confectio japonica is probably wanting, we mean a medicine of a similar kind to that which occurs under this title in the last Edinburgh Dispensatory. The externals are sufficiently exact. The College seem not to have provided practitioners sufficiently with sedative ones, unclogged with wax; but perhaps these may be supplied by extemporaneous prescription. As we have not given many specimens of Dr. Healde's remarks, we shall add two, that on the emplastrum cantharidis, and on the emplastrum ladani. We point out the last chiefly to observe, that as the committee had prepared a narrative, it certainly should have been published, or at least more important extracts made from it.

Complaints have been often, and for a long time justly, made of the failure of blisters,—not perhaps always from a defect of the former formula. This and another composition were

at the same time applied by one of the committee on himself: this was found to answer perfectly well, and with less pain than the other. That this, however, or any other composition should constantly succeed, the apothecary must be careful that the flies be good,—fresh powdered,—that powder very fine,—and that the plaster be neither made in too great quantity at once, nor spread with a spatula too much heated.'

'This is the empl. stomachicum of the former Dispensatory. The committee thereon apprehended that no such plaster could be effectual without some volatile substances;—that, to produce any considerable effects, the application must be frequently renewed;—and that this, being but moderately adhesive, might, without offending the skin, be taken off as often as should be judged necessary. See their Narrative.'

We cannot conclude without expressing our approbation of the New Pharmacopœia in general. Difference of opinion will always occur; and, in a work like this, some complaisance is due even to the errors of our fellow-labourers. Other observers may point out more faults than we have done, or may think that some of these are superfluous. We have given only the honest result of a careful enquiry, without wishing to raise the credit of our perspicacity, by multiplying faults, or court favour by concealing them. Our end is sufficiently answered, if it leads practitioners to reflect on some points which they have not attended to, or furnish a hint to the College in their next edition.

An Essay on the Malignant, Ulcerated Sore Throat; containing Reflections on its Causes and fatal Effects in 1787. With a remarkable Case, accompanied with large purple Spots all over the Body, a Mortification of the Leg, &c. &c. By William Rowley, M.D. 8vo. 2s. Nourse.

THE Essay before us is the production of an excentric, though ingenious practitioner, to whom we are indebted for fancies and for improvements. In this work he is extremely tedious, and we began to suspect that he felt the fatal influence of narrative old age. The introduction contains an account of Dr. Rowley's life, education, and experience: it is diffuse, without the least interest. In the ensuing pages he returns to the same subject in different forms, and details the same precept in words but little varied. The sixth and latter part of the ninth sections, in pages 12th and 14th, are nearly the same. The second and fourth causes of putrid complaints differ but in words; and, in the latter, as well as in other parts of the Essay, mephitic air is blamed for effects which, we suspect, it never produced. If any kind of air, independent of the
mias.

miasmata which it conveys, is injurious, it is phlogisticated air. The choke-damp, which is styled mephitic, is generally either phlogisticated or inflammable air: in some cases, it is an union of both. Besides little inaccuracies of this kind, which are very common, there are many errors, from indefinite language. Dr. Rowley tells us, that he has ascertained the real *causes* of many diseases by dissection; but those who are best acquainted with dissections and with practice have generally found that, in opening dead bodies, they have seen only effects, or effects with difficulty distinguished from causes. Again, in page 6th, from the comparative view of diseases 'it appears that the *rains* began sooner.' We believe no diseases can discover the quantity of rain: it may be guessed at, perhaps, if the temperature of the air be also known. In page 13th, he speaks of the laxity of the blood producing a laxity of the arteries; but nothing is more evident, from the celerity of the changes, that both are produced by the same causes. One instance more:

'Fixed air is prevalent in the bottom of mines, and called *choke-damp*.

'It arises from liquors in a state of fermentation, and occupies *their surface*, called, by the former chemists, *gas*, and, indeed, lately *gasses*, by a very ingenious philosopher.'

The case which is first related, was very highly putrid, and managed with care and effect. The success was such as Dr. Rowley deserved, from his spirit and decision; but the views and designs, the ratio symptomatum, and the powers of remedies, are spun out to an unmerciful length. Poor Nature too, is abused without mercy, because she will not cure diseases which, before the bodily effects are produced, undermine the vital power. It is true, that she must be trusted little in putrid complaints, and in some chronic ones; yet she often performs miracles. There is no subject, perhaps, which requires a nicer, and a more accurate discussion, than what the powers of nature are, and how far they may be trusted; but this discussion must not be reserved for the rash hand of Dr. Rowley.

It is easy to enumerate the methods of our author, so far as they may not be generally practised, for none are new. He gives bark and cordials early, and as freely as the violence of the disease seems to require. He uses gargles of mineral acids and bark. He thinks blistering of at least doubtful efficacy: to say the best of epispastics is, in his opinion, that they do no harm. He gives the acescent purgatives, with senna, and condemns the salts. Purging, however, he uses with great moderation, and emetics he thinks injurious. Fresh air and cleanliness are, as may be expected, important objects. In all these
opinions

opinions we agree with him ; but we have not commonly pushed the bark so far ; and have been afraid of using it in the angina maligna trachealis. So far as we have employed it, we think it has done harm ; but, in that disease, with this exception, we can fully confirm our author's observation, that bark does not increase the dyspnœa of putrid diseases. His criticisms on the practice of other authors are just, but, in some instances, too severe. The temporary phrenitis, which he describes, we have often seen as the first symptom of putrid complaints, and seen it very transitory. It was once removed by a large glass of strong negus, with nutmeg. The spices and aromatics, as local applications in ulcerated sore throat, our author has not sufficiently attended to. As a specimen of his best manner, we shall select his account of the phrenitis maligna. We shall select it as a counter-balance to our criticisms on his faults.

1. The patients are seized with a species of delirium without fever.

2. They talk wildly, expressing false fears, and describing false images of the mind.

3. No heat, thirst, discoloration of the tongue, cold shiverings, or any other febrile symptoms appear.

4. Sometimes they are melancholy ; at others so obstreperous as to require three or four persons to hold them.

5. The pulse is never, or rarely, quick, but, on the contrary, is depressed, and slower than usual ; some have beat so slow as forty in a minute.

Bleeding shewed the blood not to be in an inflamed, but lax state ; and, if repeated, did manifest injury.

Evacuations of vomiting, sweating, and purging, answered no purpose, except to lower the patients, and prolong the disease.

The disorder appeared so similar to a maniacal affection, which is a delirium without fever, that the straight waistcoat was, in some instances, proposed, or the removal of patients to a mad house.

It differed, however, from the true inflammatory phrenitis, being destitute of fever ; and from madness, because it has happened to numbers, and terminated in a few days.

From many circumstances, it appeared of the putrid kind, absorbed from putrid *miasmata*, and determined to the brain and its membranes.

The remedies, which have cured the cases I have seen, are, camphor in large doses, and, after a proper laxative, the *cortex Peruvianus*.

Dr. Rowley promises many other publications. We hope that he will not be so diffuse as in the present Essay. The leaves of a luxuriant tree either prevent or hide the fruit.

The

The History of Funguses, growing about Halifax. With Forty-four Copperplates; on which are engraved fifty-one Species of Agarics. 3 Vols. Vol. I. By James Bolton. 4to. 2l. 2s. coloured, 1l. 7s. plain. White and Son.

MR. Bolton's first volume contains fifty-one species of agaricus, and we find that at least nineteen more remain, for after plate 70th, where the agarics are concluded, we are told there will be a methodical Index of all the species of this genus. This would at once lead us to conclude, that our author has raised many varieties to a higher rank; for Linnæus had enumerated only twenty-eight species; Murray, with all the improvents that could add to the 14th edition, thirty-nine; and Hudson fifty-one. Hudson indeed occasionally divides the species too minutely; and in this instance he has done so, though one of his varieties is considered by Murray as a distinct species. Linnæus has remarked that he mentions but few species of the fungi, to avoid varieties, which are more numerous in this class than are usually supposed, though it may be alledged that it is not easy to distinguish between species and varieties in plants, which cannot be preserved, or in general raised from seed.

Of the fifty-one fungi described by Mr. Bolton, we can find but sixteen in Hudson; but we cannot properly compare these authors, unless we were certain of the exactness of the references, or had all the species before us. Our author apologises for the defect of some references; and where we suspect defects, it is not easy to say, whether the name in Hudson is omitted, or that the plant in question may not be a variety of some future species. It is not indeed probable, that all the fungi of England may be found in the neighbourhood of Halifax. We must therefore omit all critical examination, and give an account of what Mr. Bolton has done.

The Introduction contains a general account of the different genera, and the objects of attention in the discrimination of the various species. These descriptions are illustrated by references to the frontispiece, where, with some fancy, the different genera are hung in a festoon. The species described from Hudson in this first volume, are the Androsaceus, Clavus, Candidus, Campanulatus, Cinnamomeus Deliciosus, Denticulatus, Extinctorius Fascicularis, Fimetarius, Integer, Lactifluus, Muscarius, Procerus, Piperatus, Umbelliferus. The thirty-five other trival names it would be useless to transcribe, without a farther description of each than our limits will allow. We shall select a specimen of our author's manner, and it shall be what he supposes to be a new species.

‘ Aga.

* *AGARICUS stipitatus, pileo lamellis et stipite albido, tota planta coriacea.*

* NOVEL AGARIC.

* The root is a little hard tubercle, the size of a small pea, of a brownish colour, and furnished with a great number of fine short capillary greyish fibres: there is no volva.

* The stem is round, cylindrical the thickness of a duck's quill, three inches high, of a dead white colour, and of a solid, firm, tough, elastic substance, but easily splits from end to end, in white, springy, shining filaments: there is no curtain.

* The gills are disposed in three series, rather broad than otherwise, remotely placed, white, and of a tough and pliable substance.

* The pileus at first convex, afterwards becomes horizontal and depressed in the centre, with a cavity resembling a navel; it is from one to two inches diameter, of a white colour, a smooth surface, and a tough elastic substance. The plant is of a slow growth, and abides for weeks; in decay the colour changes from white to a yellowish brown, after which it melts in a brown liquor.

* Grows in close plantations, particularly those of fir or larch, from July to October. It abounds in the plantations about Fixby-Hall, the seat of T. Thornhill, Esq; the rich and extensive plantations around that rural and beautiful villa, have afforded me several curious and undescribed species of British Fungi.

We have selected this description partly for the sake of the concluding paragraph, and to remark that new mushrooms, which occur in extensive plantations of foreign trees, may be truly suspected of not being indigenous. There are some others found in hot-houses, which are equally suspicious, and perhaps our seemingly native plants may be in this way increased, without our having a right to claim the treasure as our own.

This work is illustrated by forty-four plates; and the second volume will contain twenty-six more; for, as we have remarked, the Agarics conclude at plate 70. It will contain also the genera of Boletus, Hydnum, and Phallus. The third volume comprehends the seven remaining genera; and, as the objects are small, the plates will be less numerous. This work seems to be executed with the author's usual accuracy: the plates are clear and expressive, rather than elegant; and the language is properly adapted to the work.

The Observer: being a Collection of Moral, Literary, and Familiar Essays. Vol. IV. 8vo. 3s. in Boards. Dilly.

WE have examined the different parts of this collection, in our LIXth Volume, p. 297, and in the LXIIIrd, p.

93. and have found great reason for commending its style, the information contained in it, the various entertainment plentifully dispersed, as well as the moral tendency of the whole. Mr. Cumberland, like the industrious ant,

'Ore trahit quocunque potest atque addit acervo,'
for this is not the last volume, and may be the fruitful parent of many more. Its merits are not inferior, in general, to those of its predecessors, though we found, or thought we found, the language polished with less care, the sentences sometimes not so happily turned as they appeared to be before. But as we have looked carefully for examples of little negligences, with no great success, we would not accuse our author of inattention: yet sometimes we may, perhaps, feel what we cannot describe, and be sensible of a difference on the whole, though it may not be readily pointed out in particular parts.

The subjects of this volume are chiefly a continuation of the Grecian literary history; it comprehends an account of the authors of the middle comedy, with some remains, collected with no little labour, and translated with great neatness and accuracy.—The stories are well-told: the character of Ned Drowsy, in some respects, perhaps, too artificially described, is, however, delineated with great skill, and the changes which love, almighty love, produces, developed with accuracy. Mr. Cumberland also appears as a polemic with good success. His observations on Dr. Priestley's opinions deserve attention, and his answer to David Levi is highly satisfactory. But we need not examine works of this miscellaneous kind in detail. As we have not yet given any account of the Grecian dramatists from our author, we shall, in this article, give some specimens of the volume, from the Numbers which relate to that subject.

From this collection, we feel the most lively regret at the loss of the works of these dramatists: there are, in the different extracts, much comic humour, with animated descriptions of men and manners; many judicious reflections, and well-drawn morals.

Our poet (Alexis, one of the earliest writers of the middle comedy must have been in an ill-humour with the sex, when he wrote this comedy, or else the Athenian wives must have been mere Xantippes to deserve what follows,—

Nor house, nor coffers, nor whatever else
Is dear and precious, should be watch'd so closely,
As she whom you call wife. Sad lot is our's,
Who barter life and all it's free delights,
To be the slaves of woman, and are paid
Her bridal portion in the luckless coin
Of sorrow and vexation. A man's wrath
Is milk and honey to a woman's rage:

He

He can be much offended and forgive,
She never pardons those she most offends:
What she should do she slights, what she should not
Hotly pursues; false to each virtuous point,
And only in her wickedness sincere.

'Who but a lunatic would wed and be
Wilfully wretched? better to endure
The shame of poverty and all its taunts
Rather than this. The reprobate, on whom
The Censor set his brand, is justly doom'd
Unfit to govern others, but the wretch
Who weds, no longer can command himself,
Nor hath his woe a period but in death.'

Alexis, in his riddling description of love, greatly resembles Shakspeare, who tortures one poor word a thousand ways: he does not, however, speak with great respect of that passion, and, in general, the authors of the middle comedy are not very complaisant to the fair sex. It is the æra of polished refinement that pays the ladies the respect due to them, and sometimes makes them least deserving of it. The following tender and pathetic sentiments are of a different kind, and highly beautiful: they are the production of Clemens, an author also of the middle comedy.

'Let the earth cover and protect it's dead!
And let man's breath thither return in peace
From whence it came; his spirit to the skies,
His body to the clay of which 'twas form'd,
Imparted to him as a loan for life,
Which he and all must render back again
To earth, the common mother of mankind.'

'Wound not the soul of a departed man!
'Tis impious cruelty; let justice strike
The living, but in mercy spare the dead.
And why pursue a shadow that is past?
Why slander the deaf earth, that cannot hear,
The dumb that cannot utter? When the soul
No longer takes account of human wrongs,
Nor joys nor sorrows touch the mouldering heart,
As well you may give feeling to the tomb,
As what it covers—both alike defy you.'

As a specimen of the comic cast, we will select the following description of a lexicaphanic servant, who speaks, as we suspect, from Homer. Lucian has much of this kind of wit, but the original must be looked for in Straton.

'I've harbour'd a he-sphinx and not a cook,
For by the gods he talk'd to me in riddles
And coin'd new words that pose me to interpret.
No sooner had he enter'd on his office,

Than

Than, eyeing me from head to foot, he cries—
How many mortals hast thou bid to supper!
Mortals! quoth I, what tell you me of mortals?
Let Jove decide on their mortality;
You're crazy sure; none by that name are bidden.
No table-usher? no one to officiate
As master of the courses?—No such person;
Moschion and Niceratus and Philinus,
These are my guests and friends, and amongst these
You'll find no table-decker as I take it.
Gods! is it possible? cried he: most certain
I patiently replied; he swell'd and huff'd,
As if forsooth I had done him heinous wrong,
And robb'd him of his proper dignity;
Ridiculous conceit!—What offering mak'st thou
To Ersichthon? he demanded: none—
Shall not the wide-horn'd ox be fell'd? cries he;
I sacrifice no ox—nor yet a wether?
Not I, by Jove; a simple sheep perhaps:
And what's a wether but a sheep? cries he.
I'm a plain man, my friend, and therefore speak
Plain language:—What! I speak as Homer does;
And sure a cook may use like privilege
And more than a blind poet—not with me;
I'll have no kitchen-Homers in my house;
So pray discharge yourself!—this said, we parted.'

We shall transcribe but one short passage more, which we think carries its own apology with it. It is a description of the manner of Demosthenes, from Timocles.

' Bid me say any thing rather than this;
But on this theme Demosthenes himself
Shall sooner check the torrent of his speech
Than I—Demosthenes! that angry orator,
That bold Briareus, whose tremendous throat,
Charg'd to the teeth with battering-rams and spears,
Beats down opposers; brief in speech was he,
But, crost in argument, his threat'ning eyes
Flash'd fire, whilst thunder vollied from his lips.'

There is a discovery of some curiosity in this volume, which will probably be new to many of our readers, that Ben Jonson, in one of his love-songs, which is full of forced conceits, was entirely indebted to the sophist Philostratus. The song is the ninth in the collection, styled the Forest, and will be readily recollected from the first line,

' Drink to me only with thine eyes.'

The literal translation from Philostratus's third letter is—
' Drink to me with thine eyes only; or, if thou wilt, putting the cup to thy lips, fill it with kisses, and so bestow it on me.'

In

In many respects he is very complaisant to Ben Jonson; he examines the Fox with critical accuracy, traces its author often in classic ground, and, after noticing its principal imperfections, concludes that, critically speaking, the Fox is nearest to perfection of any one drama, comic or tragic, which the English stage is at this day in possession of. Perhaps the classical dust, which so plentifully covers this antiquated play, may have blinded Mr. Cumberland a little: we must, indeed, own, that no play of Jonson shows a stronger and more vigorous conception, more happy contrivances, and bolder as well as more characteristic language; but it cannot be concealed that, in the characters as well as the language, he was little more than a copyist. The Hæredipeta was almost new to the English stage; and he gave the Parasites English words: to make the person they flattered over-reach them, was not a novelty either in Greece or Rome.

The supposed Grecian manuscript, which gives an account of ancient paintings, but which is designed to describe Mr. Boydel's design of illustrating Shakspeare, is well conducted; and the similarity of some of Shakspeare's situations to those which may have occurred in the lost plays of Sophocles and Euripides, displays much imagination and knowledge. Mr. Cumberland, we may suppose, did not design to deceive: he has left the secret too much disclosed for that purpose, and that Number will not long deceive any reader of Shakspeare. It would have succeeded better if he had not mentioned the Areopagus.—On the whole, we shall not regret to find this volume succeeded by more of the same kind. We would, however, recommend, at the conclusion of the work (longe absit) that a copious index be added: particular facts of importance are scattered with so much uncertainty, that the utility of these volumes will be greatly lessened if this appendage be neglected.

Idées sur la Meteorologie par I. A. De Luc. Continued from p. 135.

IN our Review of the first part of this work we mentioned the author's opinion, that all bodies of the class of vapours consisted of a lighter yielding matter, and a heavy one, dissolved in, or intimately combined with it. Fire, which he considers as a vapour, has light for its yielding or expansive principle, and the more solid ingredient he calls the matter of fire. This principle must be kept in view through the whole work, particularly in the third Chapter, to which we are proceeding, and which treats of the electric fluid as a vapour: the first section is on the analogies and differences

between the electric fluid and watery vapours. This fluid, as a vapour, must consist of the two matters which distinguish other vapours, the fluide déferent, which he calls the fluide déferent électrique, and the grosser material, which he styles the electric matter. This description at first puzzled us considerably: if the former were what we have called the electrical fluid, and the latter the electric body, we could see some foundation for the explanation; but if it were so, the analogies would be often fanciful, and generally inaccurate. If it were not, our author seemed to have divided a fluid, which appears simple, into two imaginary ingredients, to reduce it under a class whose foundation, with respect to its composition, is itself imaginary. It is necessary, however, to pursue M. de Luc, in his explanation of electrical appearances; and we must also adopt his language.

The difference between conductors and non-conductors, he observes, is this: in the former, the electric fluid plays on the surface, while it is absorbed in the substance of the latter. Excitement consists only in the agitation of the electric fluid, and one body, by accident, catches more of it than another. In reality it is only visible when taken from the substance of the one, and scattered over the surface of the other: its escape from the latter is influenced by various circumstances, which we cannot enumerate. The phenomenon of the magic plate is explained by an experiment, which applies but imperfectly to it. If a plate of glass be moistened with water, and to one side some water in a state of vapour be added, the vapour will be decomposed, the newly-formed water will be added to what was there before, and the heat penetrating through the glass, will reduce the water on the other side to a state of vapour: of course the opposite sides will be in different states, the first will be warmed by the escape of the latent heat, and the other will be cooled by the evaporation; but, as the heat on one side contributes to the changes on the other, they will by degrees come to an equilibrium. The same events take place in charging the magical plate of glass; if, for the vapour, we substitute the electrical fluid, and for the heat, its yielding ingredient. The same explanation is also adapted to the Leyden vial; but the whole is incumbered with many difficulties; and must be admitted with great caution, even if the composition of the electrical fluid should be allowed, or if it shall hereafter be proved.

In the same way, though scarcely more satisfactorily, are explained the phenomena of M. Volta's electrophorus, of which the construction we must suppose well known. When the waxen side is rubbed, negative electricity is produced. — The place of the

the electrical fluid is, however, supplied by the yielding fluid, on the other side, which leaves the heavier part less capable of resisting the electricity of the earth; so that some portion of electrical fluid is supplied from that source. These opposite changes are bounded by the limits of the negative electricity; and these different states are permanent, because the side which is rubbed receives with difficulty the quantity of fluid which it had lost, and because the expansion which the electrical fluid on the under side receives, by the increased quantity of yielding fluid, prevents any alteration. The particular circumstances of the experiment are detailed and explained, in a manner equally hypothetical. The condenser of electricity, is, in our author's opinion, an instrument, whose nature is very different from that of the electrophorus: its object, as we have already observed, is to make small quantities of electricity sensible. Our author describes M. Volta's instrument, which is generally known, and explains it particularly, but in a manner that we cannot abridge.

The next section is on electric influences, and relates to difference of opinion, between lord Stanhope and M. Volta. The fact occurs in lord Stanhope's Treatise on Electricity. If to the prime conductor of an electrical machine, another long insulated conductor be presented, and placed on the same line with it, during the time of its influence, the extremity of the second conductor nearest to the first, is in a negative state; the most distant extremity is positive; and there is an intermediate portion, where the state of the conductor is unaltered. M. de Luc thinks the different opinions on this subject may be reconciled by supposing these two philosophers to consider it in different lights. Lord Stanhope speaks of the density of the electric fluid, which of course is less on the negative than the positive sides, while M. Volta considers only its expansive force, which remains unchanged. The experiments which relate to this subject, and which we cannot transcribe, fill the remainder of this section; and they seem to show pretty clearly, that the changes in the density are not attended with proportional changes, in the expansive force, during the action of the influences. It may be, however, proper to observe, that our author points out the analogy between different vapours, in their action on the instruments designed to measure their degrees. Thus, while the electrometer is rather the measure of the expansive force than of the density of the electrical fluid, the thermometer, he has endeavoured to show, is the same of heat, and the manometer with respect to watery vapours. But, since the theory of these fluids is on so uncertain a footing, we cannot depend much on this analogy.

The seventh section is on electrical motions; and as the terms attraction and repulsion have been considered not as facts, but as implying the cause of the facts, M. de Luc employs the terms of tendency to approach or separate. The first law of electrical motion, which our author considers as a fundamental one, is, that when bodies at liberty are electrified they move only in proportion to the quantity of electrical matter, that is, in the ratio of the densities of the electrical fluid, and not of the degrees of its expansive force. The yielding fluid, though it influences the distribution of the heavier fluid, yet passes too freely through bodies to affect their motion. From this source M. de Luc proceeds to explain the particular motions, and to apply what is established by experiment to this general law. From numerous experiments he thinks he has reason to conclude, that the motions depend really on the quantity of the electric fluid, and not on the yielding fluid. In this enquiry, though the experiments are curious, and in some respects useful, he seems not to have advanced one step. His hypothetical yielding fluid has no share in electrical motions; so that it is like a man of straw brought in only to be destroyed. He next proceeds to explain how the air contributes to determine the laws observed in this respect in sensible bodies. The general law is found to be the following: when the air which surrounds a body at liberty more nearly agrees, in its electric state, with one of the sides of this body than with the other, the body moves to that air which differs in the greatest degree from it. M. de Luc employs large bodies in these experiments, in preference to small ones, and discovers their state of electricity by the application of electrometers. He next proceeds to describe this instrument, so often mentioned, and so generally employed. After a pretty long enquiry what an electrometer ought to be, and which our author designed that his should be, he describes it with a minute accuracy. Indeed there are not only electrometers for great degrees of electricity, but for small ones, in our author's words megameters and micrometers, since, in various views, the instrument which can measure small degrees of electricity would be a very inadequate standard for the greater accumulations. The best construction of a megameter is not very clearly ascertained; but when properly made, one very important use of the instrument is pointed out, viz. to ascertain the necessary proportion between the size of the prime conductor, and the power of the machine; for when the former is too small, the electric fluid escapes by starts, and gives sudden vibrations to the electrometer. There is a very obvious distinction in the use of these instruments, between the size and length of the spark, and the quan-

quantity of electricity, since much depends on the situation of the conductors, and the manner in which the sparks are drawn; but we cannot enlarge on this subject without describing M. de Luc's instrument, which is constructed with much accuracy and ingenuity; and this is out of our power, as the description depends entirely on the plate. The descriptions also of some other electrical apparatus, which should with more propriety have been placed in the former part of the work, are equally incapable of illustration without the engravings.

M. de Luc dwells, with melancholy reflections, on the great defects in this science, the abilities requisite to supply them, and the little prospect which, from his declining years, he possesses of being able to pursue experimental philosophy to any great extent. He tells us, however, and we hear it with pleasure, that he does not mean to leave the subject. He has left us a plan of his electrical projects, which show the extent of his knowledge, and the justness of many of his views; yet we know not that we could give an adequate idea of them in our present limits; and those who would wish to follow this path, would undoubtedly prefer the original information: to others, they can be only interesting when the events are known.

The electrical figures of professor Lichtenberg are not well known, though they were described, we believe, in the Göttingen Transactions in 1779: if a non-conducting substance is covered with powdered resin, shaken through a cloth, and then electrified, it is scattered in regular figures, and assumes the form of stars of concentric circles, &c. The parts of the surface which the resin has left seem to be in a negative state, and the other parts where it is accumulated in a positive one. If one part of the non-conducting substance be electrified, the figures are more determinate, and different in the two kinds of electricity. The dust becomes negative by the friction through the meshes of the cloth. But it appears, on farther enquiry, that it is not only necessary for the uncovered part to be in a negative state, but that this state must not be too much affected by the opposite side; since in glass, the plate generally used, the two surfaces are so near that they influence each other, and, instead of the state of one surface, the sum and difference of the states of both surfaces should be enquired into. M. de Luc explains the particular figures, from these principles, and finds in the variety of forms, which the powder assumes, some support of his former doctrines: indeed these figures seem to show pretty clearly, that in non-conducting bodies the electrical fluid is adherent, and sometimes obstinately retained. These experiments also contribute to

prove that the passage of the electrical fluid is by starts and intermissions.

In the 13th section, on the various conducting powers of different vacua, our author observes that the electric fluid does not exist in space not occupied by other bodies, but is rather an appendage to different bodies, of at least no greater subtilty than the various aerial fluids; nor is it ever in a separate state, but in its passage from one body to another. A perfect vacuum, he thinks, is a non-conductor; and he offers various reasons, in our opinion convincing ones, to show that the apparent conducting power depends on the watery vapour, which in many vacua takes the place of air: in the most perfect Torricellian vacuum, made by boiling the mercury in the tube, there is no conducting power. He explains more particularly the experiment on this subject, mentioned by Dr. Priestley, in his first volume of Experiments on Air, part second, and shows that the luminous appearance which Dr. Priestley does not particularly mention, arises from the glass, which, in some peculiar circumstances, permits the electric fluid to pass along its surface.

In the Section on the decomposition of the electric fluid we expected some account of the fluide déferent; but we were disappointed. M. de Luc considers the electric fluid as decomposed in passing from one body to another, and that its light escapes. But the nature of light is uncertain: there is great reason to think that it is only a peculiar modification of the matter of fire, for light gives phlogiston, and phlogistic properties may be taken away, by keeping the substance in a dark place; but independent of any disputed hypothesis, the light which escapes on the passage of the electrical matter from one body to another, cannot arise from a decomposition of this matter, because the body of a non-conducting one is electrified; and from that newly-electrified body all the phenomena of electricity may be produced. In reality, light seems an accessory principle to the electric fluid, either arising from the friction by which it is excited, or by that which is occasioned by its rapid progress. It is a principle of the fluid while in action; but seemingly in that state only. Our author's hint, that the fluide déferent may be the matter of heat united to light, must, therefore, fall to the ground. From the experiments now carrying on by the Royal Society, in order to form the nitrous acid from electricity, we may expect some information of the real constitution of this fluid.

The last chapter contains general considerations on the expansile fluids, which may be arranged among the vapours. These reflections are very judicious. As we see heat only in its
free

free state, and find that it produces great effects when latent only, and an ingredient in the composition of bodies, we may expect that many changes, many phenomena, may arise from a similar alteration in the state of the electrical fluid. These undoubtedly it should be our business to study. M. de Luc adds some just remarks against too great fondness for analogy, which may be applied to himself and his own work. They are designed to oppose some of the fancied analogies between electricity and magnetism.

The Appendix relates first to M. Saussure, and to his last volume of Journeys on the Alps. The reflections are interesting; but they cannot form the subject of our present enquiry. To M. Trembley's criticisms, whose memoir on the method of determining the heights of mountains by means of the barometer, is subjoined to M. Saussure's work, our author gives some answer; but on this dispute it is unnecessary to enlarge. Another subject of the Appendix is an answer to some objections of his friends, and observations on one of the experiments of M. Saussure. In answer to these objections, Dr. Black's claim to the discovery of latent heat is completely ascertained. The last part of the Appendix relates to Dr. Crawford, whose Letters are here printed, and contain one of his later experiments; but as his new edition is now in our hands, we shall examine it with care.

As we have told M. de Luc our opinion very freely, we shall not add any thing by way of a general character. He is a sagacious and enterprising philosopher; and his success has been hitherto considerable. His present work deserves much attention, though the manner is unpleasing, and his style often too diffuse.—His second volume, which is published, we mean to take up very soon.

A Voyage to the River Sierra-Leone, on the Coast of Africa.

By John Matthews, Lieutenant in the Royal Navy. 8vo.

4s. in Boards. White and Son.

THE author of these Letters sets out with a description of the sea-coast of Africa, from the river Rionoonas, the northern boundary, to cape St. Anne, on the south side of the bay of Sherbro; an extent of sixty-five leagues, stretching nearly north and south, and indented with many rivers and creeks. The sea-coast, except the peninsula of Sierra Leone, which is very high and mountainous, is generally a low swamp, covered with lofty straight mangroves. Towards the habitable and cultivated parts, the country is a boggy plain, covered with a thin sward, on which grow a few straggling stunted trees of the ebony kind, without any sort

of underwood. These plains are overflowed by the sea twice a year, at the vernal and autumnal equinoxes, and deposit a mud from which the natives extract salt by a simple process.

The palm tree, which furnishes the natives with both wine and oil, flourishes in great plenty and perfection. The woods and mountains, as well as the Savannahs, are well stored with wild beasts and game. There are likewise elephants, buffaloes, wild hogs amazingly fierce and large, deer of various kinds, with musk cats, and a great variety of other animals, which the natives use for food; and monkeys of so many species that it would require a volume to describe them.

After giving an account of the natural history of the country, Mr. Matthews proceeds to relate such particulars as he has been able to collect, of the religion, laws, government, and wars of the natives, with their customs and ceremonies. We are told that it is hardly possible for an European to form an adequate idea of the religion of the pagan inhabitants of this country; for they have no order of priests, nor any fixed object of adoration which might be termed a national worship. Every man fashions his own divinities according to his fancy; and the imagination can scarcely conceive what uncouth and ridiculous figures they adore.

They profess to believe in a God, who they say dwells above them, and made and governs all things; but they have no idea of returning him thanks for a benefit; or by submission and prayer, of endeavouring to deprecate his wrath. They make offerings indeed to their devils and genii, who they suppose are the executive ministers of the Deity. They have likewise images of wood from eight to twelve inches long, painted black, which are their lares, or household Gods; but they seem to pay very little attention to any of them, except when they think they stand in need of their assistance.

The Mandingoes, who profess the Mahometan religion, are in outward appearance strict followers of the precepts of the Coran, which was introduced among them by the Arabs of Foola. Many of the Arab priests or faquirs travel not only across the country from the banks of the Nile, but likewise from Morocco to Abyssinia, and are every where supported by the charity of the nations through which they pass. These travelling mendicants never eat or sleep in a house during their peregrination.

Their government and laws appear to have been originally of the patriarchal kind; but at present the prevailing form in these parts of Africa is a kind of mixed monarchy, elective, and extremely limited. The ensigns of authority of the Kings of Sherbro are an elephant's tail carried before them;

or

or if it be sent by a messenger, it has the same obedience paid to it as to the sign-manual.—Our author appears to be well-informed, and many parts of the narrative are interesting; but for a detail of them, we must necessarily refer our readers to the work, as our attention is required to a variety of publications, of more immediate importance.

The African slave-trade forms a part of the subject of Mr. Matthews's observations. According to the best information he has been able to procure, great numbers of the slaves are prisoners taken in war; but many are sold for witchcraft, and other real or imputed crimes. Death and slavery, we are told, are in this country the punishments for almost every offence. The abolition of slavery being at present a topic much agitated, we shall extract a few of this author's observations on the subject.

‘The nations who inhabit the interior parts of Africa, east of Sierra-Leone, profess the Mahometan religion; and, following the means prescribed by their prophet, are perpetually at war with the surrounding nations who refuse to embrace their religious doctrines (and I have before shewn the zeal with which the Mandingoes inculcate their faith.)

‘The prisoners made in these religious wars furnish a great part of the slaves which are sold to the Europeans; and would, I have reason to believe, from the concurring testimony of many of the most intelligent natives, be put to death if they had not the means of disposing of them.

‘That death would be the fate of their prisoners, the example of the inhabitants of Madagascar, is sufficient proof; for since the Portuguese have declined dealing with them they put all their prisoners to death.

‘It is also given as a reason for the abolishing this traffic; that the distinctions of crimes are multiplied, and every transgression punished with slavery, in consequence of their intercourse with Europeans.

‘Upon this head I shall observe, that the crimes of murder, poison, witchcraft, adultery, and theft, are always considered as capital, and have been punished with either death or slavery from time immemorial.

‘That the punishment of death, for the commission of these crimes, is remitted by their becoming slaves, I believe, in many instances, to be the case; yet, surely no one would adduce this circumstance as a proof of its inhumanity. Lesser offences, whether they respect the religious ceremonies, or particular customs of the country, are punished by fine; which, if the defendant is not able to pay, he becomes the slave of the plaintiff till redeemed; nor can he be redeemed without the prosecutor's consent.

Mr.

Mr. Matthews concludes with some observations on the impolicy of abolishing the slave-trade, and contends that the abolition of the practice would add nothing to the happiness of the natives of Africa.

Sketches of Society and Manners in Portugal. In a Series of Letters from Arthur William Costigan, Esq. late a Captain of the Irish Brigade in the Service of Spain, to his Brother in London. 2 Vols. 8vo. 10s. 6d. Vernor.

A View of society and manners in a foreign country, not generally well known, is always an interesting subject; and we, therefore, sat down with much expectation to the perusal of the work now before us. We soon perceived that Mr. Costigan was a man of sense, that he was acquainted with the world, and had all the qualifications of an agreeable companion; so that if his travels should not afford us such pleasure as we had anticipated, we were inclined to ascribe the defect rather to the barrenness of the subject than to any particular fault in the author. After reading the whole of the two volumes, we are confirmed in the favourable opinion which we originally formed of Mr. Costigan, with respect to his capacity both for observation and sentiment. Yet, with every disposition to be pleased, we cannot say that we really have received any great degree of gratification from these Letters. One principal cause of this disappointment seems to be, that the author performs his tour in Portugal in company with some British subjects; the history of whom, with the characters of some other persons, either of Britain or Ireland, constitutes the most conspicuous part of the narrative. We shall proceed, however, to trace the traveller's progress through the scenes which appear the most remarkable.

At Evora, the Liberalitas Julia of the Romans, the travellers visit the Carthusian convent, called Scala Cœli, or the Ladder of Heaven, to which they were conducted by Dr. Butler, an Irishman, who had been thirty years president of the Irish college in that city. Of the ignorance of the recluses of St. Bruno, near this town, we meet with a remarkable instance in the reverend librarian, who believed that a copy of Homer's Iliad was an old Hebrew or Arabic book.

At Elvas the travellers are invited to dine with the governor, to whom they brought letters of recommendation. As this incident affords an opportunity of presenting our readers with an account of a Portuguese entertainment, we shall readily embrace it.

The conversation was now carried on entirely in French, in which Lord Freeman and myself were as ready as in our own language:

language: our young priest understands it also very well, but from want of practice, was not so ready in speaking it, and was therefore greatly pleased with the opportunity of improving in his pronunciation, as he quickly did, and was much encouraged by the familiarity and wonderful openness of Valeré's manner, which perfectly delighted us all; for he talked away at a great rate on a variety of topics, told us of his intrigues when a volatile young fellow, of his fighting, of his drinking and rioting: In the mean time a message came from the governor, desiring the favour of the major-general's company to dine with him (for Valeré has that rank in the service), on which he started up and exclaimed,—*A ça, Messieurs; il est temps de nous peigner, call your servants and dress quickly, Allons; for we shall have another message from old square-toes, calling us to dinner, before we are ready.*

‘We arrived however in time, and dinner was then serving up; the governor's lady was the only woman at table, and had much more the appearance of his grand-daughter, than of his wife; she was wrapped up in her long baize cloak, but her hair was done up prettily with flowers and topaz combs, and a few diamond sprigs, without any cap; the governor was also in his cloak, and there had been some fresh powder thrown upon his antient wire wig, since the morning: he took his place on the lady's right-hand, desiring Valeré to sit on her left; lord Freeman sat next Valeré, and a prodigious fat man, in an officer's uniform, with the cross of Malta at his breast, sat next the governor; his name was Don Joaõ, and the company gave him the title of excellency: he did not say a word the whole time of dinner, but he ate and drank very successfully and with great apparent satisfaction, and laughed immoderately, when the governor or lady happened to say what they wished to be taken for a witty thing, his eyes quite disappearing on such occasions, and his prominent belly heaving and being affected with strong convulsive motions. The rest of the company, which was numerous, took their places according to their ranks; the carving knight at the lower end of the table, served the company round, who were stiff and ceremonious, neither was the aid of the cheering glass called in, to exhilarate the guests, but it seemed as if the water, of which they took deep draughts, produced the same effect: his excellency Don John, in particular, swilled down a three-pint tumbler, brimsful of the crystal liquor, at a draught, and made lord Freeman stare. At last, the governor called for a wine-glass, into which was poured about a thimbleful of that liquor, and he drank to our healths; we took the opportunity, as well as Valeré, to return the compliment, but had our glasses better filled, and this we repeated twice more to the healths of the lady and of Don John. One of the priests, who seemed to be a wag, called for wine repeatedly, on which the lady began to rally him, and told him, he drank like a *mauregato* or an Englishman; here the

the governor calling for another drop of wine, drank to the king of England's health, putting the glass to his lips, but did not taste the liquor either time; the priest drank again, and talked, and it soon appeared he was the established wit of the company; the lady simpered, and Don John continued to laugh, as the French stile it, *à gorge déployée*, or with all his might.

Such are the entertainments among the people of fashion in Portugal. In respect of the peasants, the only foreign luxury they are yet acquainted with is tobacco; and when their purse can reach it, they purchase a dried Newfoundland cod-fish; but this, we are told, is a delicacy which they can seldom aspire to. A piece of bread made of Indian corn, and a salted pilchard, or a head of garlick, to give that bread a flavour, compose their standing dish; and if they can get a bit of the hog, the ox, or the calf which they themselves fatten, to regale their wretched family at Christmas or Easter, it is the utmost of their happiness, in regard to the article of diet.

Our author gives a very unfavourable account of the juridical dispensation at Porto, which is the seat of the tribunal of the high court of justice for the city, and all the northern provinces of the kingdom. There is no such thing as a jail-delivery at this place; but, in almost all suits and litigations, sentences are obtained in favour of that party which can muster the most powerful *empenhos*, or bribes; preserving only the exterior forms and appearance of justice. In criminal processes, when the fact is ascertained, the sentence is seldom or never put in execution. Even when capitally convicted, the prisoner may, by a repetition of the *empenho*, procure an eternal prorogation of the execution of the sentence.

We shall next entertain our readers with a description of his Portuguese majesty, in the year 1779, and that of two of his ministers, as drawn by the traveller, who had seen the court at a baptism in the chapel royal.

'Soon after we had taken our posts, the royal family appeared in their balcony, nearly opposite to where we were. The queen is a decent, fresh-looking woman; but as for king Peter, our tawny king of Spain, with his monstrous nose, is quite an Adonis, when compared to him: he has very hard features, joined to a foolish look, and wears a very ill-combed wig, generally to one side; and though he never tastes wine, yet, to my mind, he has altogether very much the appearance of a stupid old guzzling Englishman, about two-thirds drunk. High mass struck up as soon as the queen appeared, with a sermon suited to the occasion; and as the whole performance took up a good deal of time, we had sufficient opportunities of conversing, and making our observations.'

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'The fat purfy Jewish-looking man you see the other paying so much court to, is the premier of the day, M——s of A—g—a, without whom nothing is done. He is inspector of the royal treasury, and holds the purse-strings, director of the dock-yards and of the marine, and has been all along the great confident of king Peter, when he was the infant Don Pedro. This circumstance, together with that of his being the avowed antagonist of the late minister, was the means of advancing him to his present employments. His principal merit consists in an inexhaustible fund of address, low cunning, and dissimulation; neither his talents nor integrity are once to be put in comparison with those of his predecessor, nor has he the smallest share of his firmness and resolution. His whole business seems to be temporising, which, joined to his natural cunning, may be sufficient to answer all the limited political views of this petty kingdom, which are only confined to self-preservation. However, the late peace he made with Spain, would any where else be reckoned infamous; but as the nation has no share in the government, they care nothing about it, provided they are allowed to trudge on in their old way. In regard to money matters, he is as great a scrub as any in the nation, which may be one good reason for his being put at the head of the treasury, where he starves every thing and every body, but himself and family; for as he was before exceedingly poor, he may now be truly said to make his *choux gras*; and indeed in this, his predecessor in office set him but too glaring an example.

'I have observed (said Freeman) a thinner-looking man in the middle, with a small book in his hands, extremely intent upon the service, with his eyes riveted on the altar and celebrating priests, and who seems to be perfectly serious in his devotions. That person (said the doctor) is he whom our envoy transacts most of his business with; he is secretary of war, and of the despatch of affairs with the foreign ministers; his name is Ay—s de S——á, a good-natured, easy, simple man, the symbol of indolence, and blind attachment to all the superstition of religion, which is indeed the whole of religion in this country. He thinks he is seriously doing something when he hears mass, and blesses himself a hundred times, with the little book of the office, which he devoutly carries with him every where, carefully preserved in a neat pocket-case. Although secretary of the war department, nobody who knows him, does him the injustice to suppose he is better acquainted with the art of war, and the direction of an army, than with any thing else, except saying his prayers, accompanying the sacrament, kissing the sleeve or scapulary of every dirty friar he meets, and having a particular concern for, and care of the private interests of poor little self.'

The political state of Portugal, according to Mr. Coffigan, is at present extremely low. He thinks, and certainly with justice,

justice, that the kingdom is more indebted for its security from Spain, to the jealousy of other European powers, than to any strength of its own; and he seems of opinion, it would be for the general advantage of the country, that it were actually annexed to the Spanish crown.

Though we have not the smallest doubt that the narrative in these Letters is perfectly genuine, and there is nothing in the whole that appears in any degree romantic, yet it is conducted more in the manner of a novel than any book of travels which we remember to have hitherto perused. The histories of lord Freeman and Donna Lucretia, with those of colonel Priolet and miss Welding, are copiously interspersed in this epistolatory correspondence; and it concludes almost immediately with the marriage of those worthy parties.

We heartily wish Mr. Costigan much happiness in his native country, Ireland, to which, after an absence of many years, it seems, he is at length retiring. His twentieth letter has not escaped our observation: 'mais certainement nous donnerons un decret.' We have accordingly given our opinion; but we hope with more impartiality than either Fanchon or Dr. Tamponet.

Elements of Algebra. To which is prefixed, A choice Collection of Arithmetical Questions; with their Solutions. By J. Mole. 8vo. 6s. Robinsons.

ALGEBRA is one of those sciences whose extension and improvement are boundless. A new treatise on this science might be considered as superfluous, were not its excellence and extensive utility so well known. As the improvement of knowledge is gradual, and arises from repeated accumulations, the most trivial means which may contribute to so desirable an end, ought not to be rejected; and the writer who thinks his observations on any science capable of extending its bounds, or of removing the obstacles which may have retarded the progress of learners, in tracks already explored, is justified in communicating them to the public.

The author of this new treatise professes that it is designed merely as an introduction to the science, and to render it attainable without the assistance of a preceptor; an end it is well adapted to answer, and to be an useful assistant in schools: that the elegance of brevity has, therefore, commonly been made to give place to perspicuity; and that a care to be understood has ever been the first in view.— Though it be confessed that several good works have been published professedly on the same plan, it must also be acknowledged that many things still remain, in the writings of the higher class of authors, which often retard the success of

of unassisted endeavours: and there may perhaps be a necessity of presenting truth in various lights, adapted to the perceptions of different capacities.

The author does not profess to deliver, in this small compass, all that is to be found in the diffuse works of more voluminous writers: it appears, however, to us, that it contains the most essential principles of the science, and that it is as comprehensive as its plan and limits would permit. Neither does he aim at gaining a reputation for profoundness, by leaving a great deal to be guessed at by the reader, as is often the case, to his great mortification.

The volume commences with a select collection of arithmetical questions, or such as relate to, and are resolved by numbers only; by way of introduction and preparation for the science of algebra itself; the solutions to which questions are sometimes accompanied with explanatory notes, to excite and encourage young arithmeticians. The algebra then begins with notation, and is continued gradually and orderly on through addition, subtraction, &c. &c. to the resolution of simple and quadratic equations; and all these rules illustrated by many problems and examples of calculation, applied and resolved in a neat and instructive way.

Among the problems which produce quadratic equations, arise many which are really biquadratics; but by a peculiar combination of several terms together, they are resolved by quadratics only.

Next succeed the resolution of cubic and biquadratic equations, in a very full and explicit manner. To the general solution of the cubic equations some remarks are added, to shew how and when a cubic equation can be resolved by completing the cube, in imitation of the resolution of quadratics by completing the square.

The biquadratics are also fully and ably treated, and resolved by methods that are easy and new, or uncommon. This resolution is sometimes effected by means of cubics, sometimes by means of quadratics only, and sometimes by completing the imperfect biquadratic: and ample directions are given to know when a biquadratic can be so completed, and when resolved by quadratics; with instructions how best to perform these operations.

Having exhausted all the particular modes of treating affected equations of different degrees, the author then proceeds to the more general ones of converging series, or logarithms, &c. by which all the higher sorts of equations are resolved, whether they be reduced to simple terms, or involved in intricate and complex surds, or exponential or logarithmic expressions.

pressions. And among these are contained several new rules or improvements; particularly, in exponentials, where the given numbers are too large for the extent of the logarithmic tables; and by introducing a method of substituting for the variable exponents, by which the roots of two or more equations, containing as many unknown quantities, may be determined to any assigned degree of accuracy.

We observe throughout this work a remarkable neatness and distinctness, which must render the perusal easy and satisfactory. The demonstration of the rules of multiplication are uncommonly so, respecting the signs *plus* and *minus*. In short, the principles are laid down in the clearest manner, and exercised in the solution of a great variety of problems; many of which are new, and well adapted, both from their nature and the manner of solution, to improve and amuse the reader. In the others, which have been published before, the operations are more easy to trace, as they are resolved by extremely simple equations.

The Pharos. A Collection of Periodical Essays. By the Author of Constance. 2 vols. 12mo. 6s. Hookham.

THIS collection of papers deserves our commendation. The author does not engage in abstruse discussions, or soar on the wings of fancy. Without the charms of pointed wit, or the attractions of learning, her light-house (for that is the meaning of *Pharos*) illuminates various subjects which relate to life and manners; to decorum, and the different branches of the (*petits moraux*) minute morality. Her language is in general neat and correct; her opinions just; and her little histories told advantageously. These volumes may be ranked near the *Idler*, though perhaps the literary pride of ‘creation’s lords,’ would not suffer the humble *Constance* to stand by the *Giant Johnson*. She is inferior to the *Idler*, in pointed disquisition and strength of mind: she is superior in taste and in delicacy; in her knowledge of polite manners, and the minuter avenues of the human heart.

We shall first transcribe our fair author’s remarks on Solitude.

‘Solitude is, by many persons, considered as tinged with the dark shadows of sickness.—I had rather be ill than alone, is a trite sentiment; and indeed to those who have assiduously shunned it, its approach must be a disease, but this is our own fault. It is in the power of every body, blessed with the common comforts of life, to be as happy when left to the company of their own hearts, as when surrounded by all their friends and acquaintance; and if we have any faith in the dictum of the learned and sagacious sir Thomas Browne, who says, “He who must needs have company, must have sometimes bad company”

pany"—we shall be inclined to think solitude occasionally necessary to our peace and enjoyment.

'I own my opinion and my doctrine antiquated: when I look round the microcosm of our metropolis, I am almost a convert to the general opinion, that solitude is a grievance insupportable. To human nature, in its simple state, it can present nothing displeasing, but to the children of this generation it must, on more accounts than I chuse to name, be a most hideous monster.—With the same spirit that actuated Marc Antony against Cicero, it is proscribed, it is hunted, but where shall an Herennius be found to give it the fatal blow. The decapitation of Cicero satisfied the revenge of his opponents, and relieved their fears of his return; but this enemy can never be crushed: it is a Hydra; every head leaves its substitutes and avengers.

'As then this unwelcome guest must be a guest, it is our policy to render her propitious towards us. Let us receive her with smiles; and she will smile on us; and, for the respect we shew her by preparing for her reception, she will abundantly reward us. There is but one method of doing this or of supporting the additional languor of ill health, and that is by convincing ourselves of the utility of early mental cultivation, and acting consistently with this conviction. In solitude it will dispose us to seek amusement amongst the lettered dead; and to furnish our minds with useful knowledge; it will be the means of accumulating a fund of delight which nothing can diminish; it will make our own ideas always new company to us, and diffuse over our tempers that complacency which is equally necessary to our enjoying, in their full force, the salutary blessing of solitude, or the attractive charms of society.'

Let us take one short specimen more, which relates to a mode of conduct often disgusting, and seldom successful. It contains the concluding reflections of a fashionable beauty, doomed, as such beauties often are, to celibacy.

'A friend of mine once asked a lady, whose good fortune in disposing of her daughters has been eminent to a degree of wonder, how she contrived to marry them so well—to which she replied—By not contriving at all about it—and, indeed, I believe her success was promoted by this absence of anxiety. She made her daughters desirable companions, and she trusted to Providence for the event; but where the conduct of a parent manifests extreme solicitude on this head, it excites the contempt of the libertine, and puts sober men on their guard. As there are few cases where wedlock is absolutely necessary to the comfort of a virtuous daughter, it certainly must raise unfavourable suspicions when a father is by implication offering her to every man he sees. I protest I should suppose either that the lady's reputation needed a *salvo*, or that the old gentleman feared a gazetting.'

We cannot conclude, without expressing our satisfaction with the entertainment which we have received from these papers. There is a simplicity in the remarks, which is very attractive; there is a naivete in the narratives, that gives them the semblance of reality. The digressive story-teller has never been more happily delineated. In a few instances, however, the language is incorrect; and the metaphors injudicious, not justly conducted, or properly applied. But the instances are few, and diminish very little the reader's pleasure.

A Comparative Statement of the two Bills for the better Government of the British Possessions in India, brought into Parliament by Mr. Fox and Mr. Pitt. With explanatory Observations. By R. B. Sheridan, Esq. The second Edition. 4to. 1s. Debrett.

FOR upwards of four years these two celebrated bills have been the Shiboleth of parties in this country. They contain, respectively, those important principles of Indian government which occasioned the sudden fall of the last administration, and procured to the present that general confidence of the people with which it seems to be still distinguished. In examining a controversy so much warped with political prejudices, we shall exhibit the arguments advanced on each side of the question, and give our opinion as the force of abstract and unbiassed reason shall appear to us to determine.

Mr. Sheridan introduces the Comparative Statement with a letter to a gentleman in Staffordshire; but as this contains nothing else than indirect encomiums, of no importance to the subsequent comparison, we shall proceed to the statement, where the first paragraph that demands any particular attention, is the following:

‘ Mr. Fox’s bill established no fourth estate, nor gave any one power to the directors therein named, which did not before exist in the company; but, on the contrary, did limit and restrain the said directors, so appointed by parliament, in various particulars in which the company’s directors were not before restrained.

‘ Mr. Fox’s bill, so far from placing the directors, named by parliament, above the executive government of the country,

‘ Mr. Pitt’s bill *has* established a fourth, or new estate, or department of government, with powers infinitely exceeding those possessed by the court of directors or court of proprietors at the time when the said board of controul was established.

‘ Mr. Pitt’s bill *has expressly repealed* all the provisions in the said acts, which gave to his majesty any right, power, or

country, and out of the reach of its inspection and controul, did expressly and distinctly place them under the same obligation to communicate their transactions to his majesty's ministers for the time being, and did expressly and distinctly make them subordinate and amenable to his majesty's pleasure, and to the directions of his ministers, in the same manner, and upon the same footing, and "under the same limitations and restrictions,"

as the regulating act of 1773, and the act of 1781, and various other acts, had placed the court of directors, chosen, and appointed by the company.

That Mr. Fox's bill trenched upon the prerogative of the crown, is a charge of great weight in the general estimation of that transaction; and this important circumstance Mr. Sheridan labours with all his ingenuity to disprove, in the observations annexed to the Statement. 'If, says he, a *parliamentary* nomination of persons to be concerned in the government of India, was *an attack upon the constitution*, the constitution had sustained and survived a similar attack in the regulating act of 1773, and in the subsequent bills which repeated those parliamentary appointments. If the employing the patronage of the company, without the king's authority, was *an invasion of his prerogative*, it was of a prerogative never heard of; for the crown had never had the grant of a single office, civil or military, belonging to the service of the East India company.' In the former part of this extract Mr. Sheridan confounds subordinate regulations with the supreme jurisdiction of India, which have no similarity to each other. In respect of the latter clause, we agree with Mr. Sheridan, that the patronage of the East India company was no part of the royal prerogative; but it does not thence follow, that the annexing of that patronage to any delegates constituted by parliament, was not an invasion of the royal prerogative. It was, indeed, an indirect, but a most important invasion; because it transferred to particular agents, who derived their authority from parliament, a political influence, attached by the constitution to the executive power alone.

The essential difference between the two bills which form the subject of the Comparative Statement is, in our opinion, extremely obvious, and may be comprised in a single observa-

or authority, to interfere in any matter or concern of the British government in India, and has made the board of controul wholly *independent* in the exercise of their offices of *the general executive government* of the country; they being neither bound to abide by his majesty's will and pleasure, or even to communicate with his majesty upon any one measure or matter relating to India, of any sort whatever.'

tion. By Mr. Fox's bill, a board of Indian government was created, objectionable, not to say dangerous, by its unlimited power, and totally independent of the crown; while Mr. Pitt's, on the contrary, by assigning the nomination of the commissioners, and their continuance in office, to the crown, preserved the responsibility, without virtually extending the duration of ministers, and reconciled the efficiency of Indian government with the safety of the British constitution.

The next paragraph in the comparative statement is likewise worthy of notice.

‘Earl Fitzwilliam, and the other directors under Mr. Fox's bill, could neither have had transactions with any of the country powers in the East Indies, nor have directed hostilities against, nor have concluded treaties with, any state or power, but subject to the orders of his majesty; and his royal will and pleasure, signified to them by the secretary of state, they were bound by law to obey.’

under his authority; and these things he may do against the will of the directors, and without the knowledge of parliament; so that in truth, *the present board of controul have, under Mr. Pitt's bill, separated and usurped those VERY IMPERIAL PREROGATIVES FROM THE CROWN, which were FALSELY said to have been given to the new board of directors under Mr. Fox's bill.*

The powers which Mr. Sheridan ascribes to the Indian commissioners are such as no legislature, in the possession of its rational faculties, can ever be supposed to convey. If we rightly conceive the constitution of the Board of Controul, the members of it, should they abuse their authority, are not only liable to dismissal from office, but to an impeachment.

In the last paragraph of his Statement Mr. Sheridan affirms, that ‘neither against the board of controul acting on purposes of exclusive power and ambition, nor against the crown acting in collusion with the board of controul, and covertly directing its measures, and its influence, is there any provision made for the danger which may arise to the constitution.’ We are surprised to find Mr. Sheridan make any remark so inconsistent with the knowledge of the British constitution. It is a salutary maxim, and has been long established in this country, that ‘the king can do no wrong.’ To argue

‘Mr. Dundas, with any two more commissioners, may transact matters of any sort with the country powers; may treat with, or ally with, or declare war against, or make peace with all or any of the powers or princes of India; may levy armies there to any extent, and command the whole revenues of all our possessions for their support, without taking his majesty's pleasure upon any of these subjects in any shape, and without acting in his name, or

for the contrary, therefore, is not only inadmissible, but gives too much countenance to a principal imputation, which the author seems desirous to remove; we mean, an injurious design against the royal prerogative. The same objection which Mr. Sheridan makes in this case, might be urged with equal force against all the ministers of the executive power in Great Britain. It is impossible that their conduct can be universally prescribed by positive regulations; but for every abuse of their delegated power, it is well known that they are amenable to the tribunal of their country.

Observations upon Mr. Sheridan's Pamphlet. In a Letter from Major Scott to Sir Richard Hill, Baronet. 4to. 2s. 6d. Stockdale.

MAJOR Scott, after some severe animadversions on the claim of 'general principles,' which Mr. Sheridan arrogates to the party with which he acts in concert, proceeds to give a historical detail of the conduct of that party during the administration of lord North, and subsequent to that unfortunate period. This preliminary part of the pamphlet contains many facts and observations, which are placed by the author in a strong light. His account of Mr. Fox's bill is particularly concise:

'I perfectly agree with Mr. Sheridan, (says he) that Mr. Fox's bill is plain and perspicuous: an infant may understand it. I know no leading feature in the bill, except this, that all the power, all the patronage, and all the management of the East-India Company, both at home and abroad, should be taken from those who then held it, and should be transferred in trust for the proper owners, to seven directors nominated by Mr. Fox, not subject to removal at the pleasure of the king. Were we to reason for seven years upon the bill, we can make neither more nor less of it.'

In delineating the consequences of Mr. Fox's bill, major Scott appears in the character of a calculator rather than that of a political writer; but he produces such facts as *seem* to authorise his affirming that Mr. Fox must have repealed both his principal and subsidiary bills, in so far as they concerned the government of India, in six months, or India would have been the greatest clog to Great Britain that she had ever experienced. The facts upon which this conclusion is founded, being little known to the public, it may be proper to enumerate them briefly, after exhibiting the following paragraph:

'A clause in his own (Mr. Fox's) bill provided that full and complete justice should be done to every prince in India who had been injured by the East India company. Couple this clause with Mr. Burke's declarations, with an article which he

brought into the house of commons against Mr. Hastings, and it will be impossible not to allow, that the emperor Shaw Allum has a claim upon us for twenty-six lacks of Sicca rupees annually for seventeen years, and to the provinces of Corah, Currah, and Allahabad.'

According to this doctrine, major Scott observes, that the emperor is entitled to all the principal, and to interest at 10 per cent. The principal of the tribute alone, to this day, is nearly five millions sterling; and with Indian interest would now amount to fifteen millions sterling, exclusive of the provinces above mentioned, which would constitute a debt of as much more.

By another clause, all presents received for the company, and carried to their account, since the regulation act of 1773, were to be returned. These amount to 263,000 l.

By a clause which restored Cheit Sing to Benares, an additional debt was incurred. If his restoration was just, says this author, it was also an act of justice to repay him the treasures that he carried off and has expended; at least one million sterling; to repay him what was taken at Bedjygur, 240,000 l. to give him the difference for six years between 24 and 40 lacks of rupees, above a million sterling more.

The author next observes, that, upon the same principle, we were bound in honour to repay to the Begum the fifty-five lacks which were taken from her with the consent of Mr. Hastings; and to refrain from pressing the Nabob Vizier for the balance which he then owed to us, about 75 lacks. These two sums amount to 1,400,000 l.

Major Scott affirms, that if Mr. Fox's bill had passed; if Mr. Fox was really sincere, and meant with good faith to carry the provisions of his clauses into full effect, and to adhere to the principles which he had laid down in his speeches, he must have borrowed 35,763,000 l.; since that is the exact sum due from the East India company, in Bengal only, to the princes of Indostan, or acquired by modes so strongly reprobated by Mr. Fox's bill.

Besides this enormous debt which the nation would have incurred, the author observes, that by the total prohibition of monopolies enacted by the same bills, the company would have lost a revenue of 800,000 l. a year, which to this day would be three millions sterling; that the clause which enacted that all the lands in Bengal should be managed by zemindars, was calculated to throw the whole government of the country into a confusion not to be described, and would have been attended with a loss of revenue not to be estimated; and that the clause restricting the government of Bengal from increasing their revenues, in any possible circumstances, was an imposition so absurd as perhaps was never imposed in any country upon earth. After enumerating these facts, major Scott
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thus proceeds: 'Is it possible for me, sir Richard, to place in a stronger point of view the folly of these speculatists, than by analysing their own clauses? I have stated to you, without exaggeration, what would have been the consequences had they passed into a law.'

After having laid before our readers the most important parts of major Scott's Observations, we shall add, that he has taken a wide view of the public transactions of late years. He combats Mr. Sheridan more with facts than arguments; and is an acute and intelligent disputant on the subject of Indian politics.

Upon the whole, we may observe, that when authors, actuated by political prejudices and party-views, are opposed to each other, their writings ought to be perused with great caution. If Mr. Sheridan be considered as entertaining an interested partiality for the former administration, it ought to be remembered, that major Scott is not destitute of prepossessions, which, perhaps, neither he nor any of his friends are willing to acknowledge.

The History of the Antiquities of the Town and Church of Southwell, in the County of Nottingham. By W. Dickinson Rastall, A.M. 4to. 11. 11s. 6d. in Boards. Robinsons.

IN the introduction to this work Mr. Rastall informs us, that the materials of which it consists were collected from a number of voluminous books in public libraries; and it was undertaken for the gratification of some gentlemen who had a local attachment to the town which forms the subject of the history. The work is divided into six chapters: in the first Mr. Rastall examines the *Itinerarium Antonini*. He endeavours to prove that the station there called *Ad Pontem* is the modern Southwell, and not Ponton, or Paunton, as has been thought by Camden, and other learned antiquaries. The author adduces some reasons why Newark cannot be the *Ad Pontem* of the Romans; and, in the course of the enquiry, he gives a short historical account of that town and its castle. Mr. Rastall having described the state of Southwell, during the time of the Romans, traces its existence under the government of the Saxons, by whom it was called *Tiovulningacester*; and concerning the etymology of this name he offers some curious conjectures, supporting his opinions by the consideration of some coins found in the neighbourhood.

The next object of his researches is the church of Southwell, the foundation of which is ascribed to Paulinus, about the year 627. Concerning this edifice the author makes a variety of remarks, which will afford pleasure to the antiquary.

In the succeeding chapter the author describes minutely

the constitution of the church, the account of which will be useful to those who look for preferment at that place. In the third, he delivers a narrative of the benefactors and patrons of the church; and in the fourth, we meet with the lives of all the archbishops of York, from Paulinus the first to the present archbishop, Dr. Markham, who is the eighty-second that has held that dignity since the consecration of Paulinus in 625.

The fifth chapter contains an account of some antiquities in Southwell and its neighbourhood; these are, monuments in the church, wells, chapels, hospitals, colleges, nunneries, &c. coins; Roman, Saxon, and Danish encampments; with various other articles.

The sixth chapter is appropriated to the modern history of Southwell, which the author illustrates by different sources of information, chiefly a manuscript, the production of Mr. Savage, who had long resided at Southwell.—The concluding article of the volume contains the pedigrees of some of the principal families of Southwell and its environs.

Mr. Rastall appears to have exerted much industry in collecting the materials for this work; and, though the style of the narrative might have been rendered more polished and perspicuous, we cannot but allow him a great share of merit, for the extent of his enquiries, and the information which he has communicated. We must not omit to observe, that this history is accompanied with elegant engravings.

FOREIGN LITERARY INTELLIGENCE.

(Continued, from p. 311.)

IN this department of our work we cannot direct: we must follow the steps of others; and while we confine it to subjects of science, those sciences must oftenest occur which are most successfully cultivated on the continent. This must be our apology for resuming the subject of chemistry, though it might not have required one, if it be recollected that we have almost wandered round the whole circle before we return to it: we ought rather to apologise for the lateness of some of our information.

If the acids are the most extensively useful bodies, and occur in the greatest number, we should of course begin with them, and we do it more willingly, because, in our present Number, we have referred to some experiments which we may now explain more particularly. They relate to the congelation of oil of vitriol. To M. Chaptal it occurred by accident from natural cold: the state of air when they were frozen is not mentioned; but they were beginning to melt only at + 70, which, if Reaumur's thermometer be meant, corresponds to about 47°. The crystals were unctuous from the melting acid, and they felt warmer than the

neighbouring bodies. The form was that of a prism of six sides, flattened and terminated by a pyramid of six sides; but the pyramid appeared on one end only; on the other the crystal was lost in the general mass. The pyramid resulted from an assemblage of six isosceles triangles. The oil, when the crystal was melted, was of a yellowish black: its density has been already mentioned. On redistilling it in a proper apparatus, no peculiar gas came over. M. Chaptal repeated his experiments, and found that the highly concentrated acid did not freeze; that the density of that which he thought froze most easily, was to the oil of the usual strength for sale, as from 63 and 65 to 66; and the necessary degree of cold—2, about 19 of Fahrenheit. This fact has no relation to the crystallization of the oil mentioned by Meyer: his crystallized oil was volatile, smoaking, and odorous. The duke d'Ayen had already frozen oil of vitriol; and M. Morveau repeated the experiment in 1782 with success. The degree of concentration of *their* oil is not mentioned; but our author, with some justice, observes that strong oil lowered with water is not the same with oil produced of a given strength by rectification. In the latter there is always some colour: and it will not dissolve indigo, so as to carry the colour into stuff, while the stronger oil diluted to that strength succeeds, it is said, very well. Oil once melted will not crystallise with the same degree of cold. We hope this subject will be examined farther, for it is not yet properly elucidated.

The desire of some farther elucidation was scarcely written, before we received the information we wished for, from M. Morè; at least an explanation which is very probable; and we would not dismiss the subject without mentioning it. The author, who is a considerable manufacturer of oil of vitriol at Hadimont, near Vervier, in the duchy of Limbourg, has remarked this phenomenon, and attributes it to the addition of nitrous air. The acid of vitriol is usually separated from sulphur, by burning in close vessels; and the air is supplied, by adding to the sulphur a little nitre. He found, that by mixing the acid, capable of being congealed, with water, or employing it for other purposes, that orange-coloured fumes, and the smell of the true nitrous acid, were very evident. If this gas was destroyed, no degree of cold would congeal the acid, whatever was its degree of concentration; and the congelation was generally observed immediately after the process by which the acid was formed. If these remarks are compared with M. Chaptal's experiments, they will be found to derive no little support from them. We cannot now enlarge on the subject; but it will be obvious, that many other experiments are wanting to confirm M. Morè's opinion, and some farther enquiries to explain the operation of this gas. Is it probable, that it attracts the water of the acid, and, in consequence of its union, suffers its saline parts to concrete? To this opinion there are many strong objections; but it is not our present business to form theories.

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The acid of phosphorus is a body of considerable utility, in the analysis of minerals; and we think it an object of sufficient importance, to transcribe, from the Turin Transactions, the method of purifying it with ease and simplicity. The common way of reducing it to phosphorus, and again separating the phlogiston, is tedious and expensive. Take four parts of oil of vitriol, and six of bones calcined to whiteness; proceed as in the old process, and leave the whole to digest some time. Filtrate and edulcorate the residuum, and subject the liquor to evaporation till it has acquired the specific gravity of 1262 to 1000. Then add some aerated volatile alkali till it is saturated, which will entirely separate any earthy mixture. When the precipitation is finished, and the precipitate washed, the remains must be exposed to a pretty strong fire, which will carry off the volatile alkali, and the acid vitrifies in the form of a very pure glass, which joined to phlogiston easily becomes phosphorus. The alkali saturating this excess of acid, which is necessary to hold the calx in solution, the earthy salt must be precipitated. This salt is the true bony earth; and though composed of calcareous earth and vitriolic acid, the earth is not discovered by the saccharine acid, even when united with a fixed alkali, to give additional force by a double elective attraction. This is a fact worth recording, if true; and it arises, in our author's opinion, from the salt being capable of solution in every acid. This happens, it is said, when calcareous earth is dissolved by the excess of any acid, except the acids of vinegar and of spar. The phosphoric acid purified in this manner crystallizes easily, and takes the form of quadrangular prisms, terminated by pyramids equally quadrangular. In preparing phosphorus, M. Schiller prefers Scheele's method.—He dissolves bones in the nitrous acid, precipitates the earth by the vitriolic, and distils off the nitrous. If the acid is well purified, when mixed with charcoal and distilled, it produces good phosphorus; but M. Schiller pretends that this phosphorus shines without heat; that it may be bruised in the hands and rubbed on the face without injury; that it consumes on wood without giving signs of combustion; but that when heated, it burns with a noise.

Our readers may recollect that in a former Number, Vol. LXIV. p. 463, we gave some account of Mess. Westrumb and Hermstadt's experiments, which showed that the acids of tartar and sugar differed only by their impurity from vinegar; and that the last was most completely dephlogisticated, and the first contained the greatest portion of phlogiston. M. Hermstadt has pursued the subject, according to his promise, and in a late memoir has shown that the acid of apples, *acide malique* of the New Nomenclature, is only an imperfect vinegar. He finds that it ought to hold the middle place between the oxalic acid (the *saccharine*) and vinegar. It has too little phlogiston to assume the form of the first, and too much to deserve the appellation of vinegar. It is by a slow fermentation, he thinks, that the acid of tartar becomes the

the acid of apples in the fruits which contain it : there is, however, another difference : these acids contain the matter of heat in a greater proportion as their phlogiston is in a less. The caloric has a strong attraction to the oxygen ; and this new acid is the oxalic oxygenated acid, and its compounds oxygenated oxylats, an early proof of confusion produced in the new language, by one inconsiderable discovery.

It was one of our arguments also against a particular part of the New Nomenclature, that it gave the rank and the office of acids to bodies that were not so. We particularly mentioned the Prussian blue, and it is now necessary to give some authority for our assertion. We alluded to M. Bertholet, who has lately read a Memoir to the Academy of Sciences, in which he examines this substance with much attention, he concludes that it is composed of carbone (charcoal or phlogiston), hydrogen (inflammable air), and azote (impure or phlogisticated air) ; and that it is not an acid. M. Hassenfratz, in a Miscellaneous Memoir, has taken notice of the colouring matter of Prussian blue. He found that all Prussian blues contained phosphorated iron ; that fossil charcoal might be advantageously employed in preparing it, since a substance of this kind from the mines of Fresne, near Valenciennes, produced the blue precipitate in greater proportion than calcined ox blood ; that all the matters usually melted with alkali, for the purpose of making this preparation contain either phosphoric acid or its base ; and that this substance can be produced without any phosphoric acid, which will act as a re-agent to discover whether different kinds of iron really contain it. M. Westrumb makes some opposition to this Memoir ; but the whole amounts to this, that the phosphoric acid is produced by burning the coal. M. Hassenfratz was sufficiently guarded, by saying that the charcoal contained the acid or its base. If, therefore, the Prussian blue, at any time contains marks of acidity, they are probably to be attributed to the acid of phosphorus.

A colouring matter of another kind, has also of late been particularly examined by M. Hauffman ; we mean indigo. His Memoir, which we do not find has been read to any learned society, may be very useful to dyers. The colouring principle of indigo has not been sufficiently examined, and the action of different chemical dissolvents on it, has not been ascertained so as to render the result of the different processes certain. The colour, when unchanged, depends, in M. Hauffman's opinion, on phlogiston. The Memoir is divided into three parts : in the first, indigo is treated with acids ; and he shows that it is the vitriolic acid only, in a peculiar state of concentration, which is proper to adapt this substance for the use of the dyers : every other acid either destroys it effectually or produces no change on it. We have just remarked, from another author, that somewhat besides the degree of concentration is required ; for the browner oil, of the same strength with the stronger diluted oil, is not equally powerful. Our author does not mention the particular degree of concentration,

centration, but refers the whole to a previous experiment, and cautions us against depending too much on these experiments in miniature, since the result is often very different from what occurs in the larger quantities. With the nitrous acid he procured tartar from indigo, and sometimes the acid of sugar. We now know the reason of this variety. In the second part he examines the action of alkalis, and finds that either the fixed or caustic alkalis separately produce no effect, and no solution of the colouring matter takes place, except when to the alkali, quite free of air, some metallic composition is added, as red or yellow arsenic, antimony, &c.—This is the state of blue when used with a pencil. When some of this blue was put in contact with pure air, and shaken often, $\frac{7}{8}$ of the air was absorbed, and the remainder was phlogisticated. Part of the alkali remained caustic, and part combined 'with the acid of sulphur, which was generated,' and formed vitriolated alkali. The arsenic remained in the state of a white calx. We give this fact without any explanation: our author's system, and that of his friend, a follower of Lavoisier, are evidently incomplete and erroneous. The fact itself, to an enquiring mind, will suggest some observations which may be of use in the practice of penciling. The third section treats of the solution of indigo for the use of blue vats, by means of a precipitate of iron partly phlogisticated, and powdered regulus of antimony, joined to caustic alkali or quick lime. These metallic substances when calcined, as well as the aerated alkalis, exert no power on indigo. Our author does not proceed far in the explanation of the different appearances; and indeed till we have a more complete analysis of this substance in its original state, we can make no satisfactory advances in accounting for the different changes. One thing is certain, that indigo must contain a large proportion of pure air: M. Haussman is not a follower of Lavoisier; and there are many inaccuracies in the chemical part of this Memoir.

This celebrated heretic, we mean it not opprobriously, pursues his fugitive principle, vital air, in different bodies, and has lately read a memoir on its combination with spirit of wine, oil, and different combustibles. The substance is, however, the oxygen, the acidifying principle, or the vital air deprived of the matter of heat. It is a fact well known, that the water collected from 16 ounces of spirit of wine, amounts sometimes to 18 ounces: oil increases in weight nearly in the same proportion. These circumstances M. Lavoisier particularly enquires into; and his method of trying the result is, to burn them in a lamp of Argand's construction, to which a chimney is adapted, on the inside of the glass cylinder, whose extremity is joined to a refrigerator, with a worm tube. To burn spirit of wine in vital air, a different apparatus was required; but of this we can give no adequate idea by description. After a variety of experiments, however, he concludes, that a pound of spirit of wine contains of coal (the principle of fixed air) 4 ounces, 4 drachms, 37 grains

grains and a half; of inflammable air 1 ounce, 2 drachms, $5\frac{1}{2}$ grains; of water 10 ounces, 1 drachm, 29 grains. When burned, it weighs 2 ounces, 4 drachms, 42 grains, above the pound; and this increase of weight arises, in his opinion, from water formed in consequence of the union of the vital and inflammable airs. Various reasons prevent these results from being uniform, or indeed very exact; but, on the whole, the increase cannot be less. The water too is slightly acid, either from some acid remaining in the spirit of wine, or formed during the burning.

A pound of oil of olives contains 12 ounces, 5 drachms, 5 grains of coal, and 3 ounces, 2 drachms, 67 grains of inflammable air; its weight in burning is increased 6 ounces, 3 drachms, 38 grains. This quantity is furnished also by the newly formed water; but, to make the weight so great, it is necessary that the supply of vital air should be fully sufficient, for the complete combustion. Wax contains 13 ounces, 1 drachm, 46 grains of coal, and 2 ounces, 6 drachms, 26 grains of inflammable air: its increase, after burning, is 2 ounces, 6 drachms, 5 grains. These are facts of importance, and ascertained with great care. The author's explanations may be allowed; but we may be permitted to observe, that they do not destroy the existence of phlogiston. In this case, water must either escape unchanged, and attract some new ingredient from the air to increase its weight, or it must be formed from the different elastic fluids. The first supposition is untenable, and the last is highly probable.

The discovery of vital air daily increases our knowledge of the composition of bodies; and it should not be mentioned without assigning the incontestible merit of the discovery to Dr. Priestley. It is applied to many important purposes; among others, we may shortly mention a series of experiments, to determine its quantity in any given proportion of atmospherical air, by the quantity of phosphorus which burns in it. But to return to our continuation of chemical discoveries, which we left to pursue the principle of acidity. Of the alkalis we can say nothing very new: of the decomposition and the composition of the volatile alkali we have had occasion to speak, and we may now add the suspicions which have been long entertained relative to the composition of the fixed alkali. It must be, however, premised, that M. Wolfe has supported the analysis of the volatile alkali, by some new experiments. He found that the alkali of the Egyptian sal ammoniac was decomposed by distilling the salt with nitrous acid, while the sal ammoniac made on purpose was not affected by this acid. Probably the union is somewhat weakened by the sublimation, and it may be worth an enquiry whether the extemporaneous salt may not be affected by the nitrous acid, after it has undergone the same process. On the fixed alkali, M. Lorgna lately gave some extensive memoirs. He was inclined to think, that the basis was the earth of magnesia. Yet his experiments were not very decisive; and, while we were overwhelmed with novelties, we could not attend to suspicions only. These suspi-

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cions deserve a better character, since they are supported by concurring observations. A German chemist, M. Osburg, about the time of M. Lorgna's experiments, made some, which seemed to confirm them. He dissolved an ounce of the crystals of the mineral alkali, in distilled water, and, on filtering, found a little earth. The lixivium was evaporated, and the salt calcined. On a fresh solution, more earth was deposited. After repeating the experiment six times, the earth amounted to 26 grains; and it resembled, in all its properties, magnesia. M. Osburg concludes that the magnesia becomes a salt, by the assistance of the matter of heat and of phlogiston. He tried to confirm this conclusion, by an analysis in the moist way. He united the alkali to the dephlogisticated marine acid, and evaporated the acid again; but the alkali remained unchanged. The experiment was repeated, and after the third repetition, the salt remained in a group of beautiful crystals, which had a perfectly alkaline taste, but did not dissolve easily in water, and left a yellowish residuum. The fourth solution of the salt, in the dephlogisticated acid, was made in a cucurbit, and a considerable quantity of a reddish yellow matter was deposited. On distillation, an acid was obtained, which did not dissolve gold so readily as at first, but which changed the colour of the turnsol, and of syrup of violets more constantly. The acid seemed, therefore, to have gained some phlogiston from the alkali, and to have decomposed it. The experiment was afterwards twice repeated, on the same salt; and eight grains of magnesia procured; so that, on the whole, $21 \frac{1}{2}$ grains were obtained. M. Dehne and M. Deyeux have also at different times obtained magnesia from mineral alkali; but it still remains to enquire, whether the magnesia may not have been originally combined with it, or whether the whole of the alkali can be converted into this earth.

On the earths we have little to observe, yet the experiments by M. Dodun may deserve some attention. They relate to the fusion of earth, by the blow-pipe with common air only. His success depends on his using very small particles, and supporting them on little shreds of glass. It will at once be obvious that this cannot be styled simple fusion, for the melted glass must combine with the earths, and will probably render them less refractory. He tried the diamond, from which he observed no flame. The different precious stones melted with no very peculiar phenomena. Different granites ran into black opaque glass. Rock crystal yielded in this way, and became first a white opaque glass, then a little transparent, and at last flowed in a colourless glass. This experiment may, however, be related a little more particularly. At the first stroke of the flame it boiled *at the first part, which touched the glass.* After three minutes constant heat, it split transversely and a little blackish cloud seemed to rise from the focus. The bulk of the fragment was diminished one quarter, and it soon assumed the form of a pyramid, whose point was rounded and white; at first of a milky
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hue, and at last luminous, while the base had not lost its transparency. After three minutes more of heat the diminution was very considerable; the edges of the pyramid were much thinner: the borders were become white and a little transparent, and the body seemed to swim in an icy water, which appeared to be formed from the fusion of some small particles, broken off by the force of the heat. The summit of the pyramid was much diminished, and the base always rounded, was fuller, while its transparency was more distinct. During the last action of the flame, a reddish circle surrounded the pyramid like an areola, and it appeared to be a martial calx, which the force of the breath, and the melting of the crystal kept swimming around. The whole was fused into a semi-transparent mass of a dirty white colour; and what remained was not $\frac{1}{16}$ of its first bulk. M. Dodun says, that the rock crystal is not volatile like the diamond, yet that it entirely disappeared by a continued heat of six minutes; we suppose after the fusion, which was not completed under twenty-two minutes. Another portion of rock crystal, and a grey diaphonous quartz, though less refractory, melted into a similar glass. Mica melted into a white or black opaque glass, according to its colour; grey steatite into a black glass; calcareous spar into a greyish glass; and the lapis suillus into a greyish yellow glass. The last substance gave out a phosphoric light, on the first stroke of the flame. A white sonorous lime-stone, with a very fine grain, which rises near Castelnau dray, after fifteen minutes melted into a grey glass, of a greenish transparency: this stone also gave out a phosphoric light, at first. Mutton bones calcined, and washed in boiling water, were distinguished by a similar appearance and became a very white brilliant glass. Even asbestos and amianthus, the purest magnesian earths, which appear in a separate fossil state, were vitrified, and assumed a compact green appearance or an opaque black. Charcoal from oak became a glass; and platina alone refused to obey the flame; but it melted into little silver globules, after twenty-six minutes. These are the most striking phenomena; but the experiments are sixty-three in number, and we have been able to describe but a few.

What remains of the miscellaneous chemistry may be safely omitted. We do not pretend to give the analysis of every new mineral which we receive, or every minute observation which we may find recorded. Of what we have learned, since our last chemical intelligence, we have given the whole, as shortly as we could, one memoir only excepted, that of M. Hjelm on the nature of steel. If no earlier opportunity occurs, we shall defer it till we again resume this science; but when that period will return is yet uncertain, since it depends on the labours of others, not our own.

Edda Sæmundar Hinns Froda. Edda Rythmica seu Antiqua, vulgo Sæmundina dicta. Pars I. Odes Mythologicas à Resenio non editas continens, cum Versione Latina, Lectionibus variis, Notis, Glossario Vocum et Indice Rerum. Hælniæ. 4to.

THIS manuscript is now published, in consequence of the will of Arnas Magnæus, in whose possession it was. It is a legacy which will be received with gratitude, by the admirers of northern literature, particularly, the poets and philosophers. The manuscript itself is lodged in the royal library at Copenhagen, and it is written on vellum. Of 16 manuscripts of Sæmundin, the chief is that which the bishop Brynjolf Suenon discovered in Iceland in 1643. This has been preferred for a translation, and it was executed by Gudmund Magnæus, while the notes are partly those of the translator, and in part by Gunnar Paulsen. It consists of thirteen poems of different æras, on various subjects, collected perhaps by Sæmund, but without being his, or even translated by him from the Runic: there are indeed striking reasons to believe that the Runic was not employed in preserving even the laws before his time. All was trusted to memory, assisted by tunes and versification. Many of these poems have been carried to Iceland, by the Norwegians, and we suspect were transcribed there, after writing was taught, which seems to have been nearly at the same time when Christianity was introduced. Why the name of Edda was given to it we know not; nor have antiquaries yet decided about the meaning of the name, which seems to have been first applied to the Edda of Snorro. Arnas Magnæus derives it from *othr*, wisdom. It has been currently interpreted grandmother: another author styles his girdle *emma*, mother, because it protects his body, as a mother does her child: another, still more refined, calls it grandmother, because grandmothers instruct their children. The language of these old songs is much too simple for the time of Sæmund. The artificial turns, and the studied points which distinguish the poets of the 10th century, do not occur: the obsolete expressions and corruption of the text, and the obscurity of the allusions render it, however, difficult to be understood. The chamberlain de Suhm has, in his historical works, pointed out the probable period of their composition; and we may take some notice of his remarks on the subject. It is necessary to premise, that an Edda, ascribed to Snorro, which is supposed to be a production of the 13th, or as Arnas Magnæus supposes, of the 14th century, was published by Resenius in 1665. An older Edda was suspected by some authors to exist, and two poems supposed to belong to that older work were selected by the same editor: their titles were *Völuspá* and *Hæavamal*; and it is these poems to which the title page alludes, where it mentions the odes not published by Resenius, for these are now omitted. The mythological part too is only found in this volume; but the historical is to follow. These

These odes do not form a complete system of northern mythology, and still less a collection of their symbolical doctrines; much of the older systems are still lost, or to be found even in more modern collections. The author of Snorro's Edda must have had many other memoirs in his view, since he relates fables, of which there is not the slightest vestige, in the Edda before us. In both, however, we distinctly find the doctrine of the immortality of the soul, of a state of retribution, of rewards and punishments, and of the renewal of the world. The union of light and darkness, with the assistance of the elements, are supposed to have produced this world; and their disunion will one day destroy it. Much of his mythology is accumulated in the preface, and the similarity between it, and the Grecian mythology is also shown.

Next follows the life of Sæmund, called Froda (the learned) written, by Arnas Magnæus. He was born in Iceland, about the year 1056, studied in Germany, and returned to Odda, the inheritance of his fathers, about 1076—He became an ecclesiastic, wrote the history of Norway, when he was seventy years old, and died in 1133. The annals of Odda are not wholly his, though they were undoubtedly written in part by him; but it is a difficult task to select his works, as many things have been attributed to him, in which he had no share. The poems, we have said, were collected by him, and we have no reason to refer them to a very remote antiquity, though they are of an æra, when figures and metaphors were little used. They are of a dramatic kind, and the facts are related with as much simplicity as they were performed. Sublimity and absurdity, as sometimes happens in old writings, are freely mixed, and intimately blended.

It were to be wished, indeed, that the Edda was complete by the republication of the poems formerly printed by Resenius. Copies of these poems are scarce; the omission could not be owing to their having before appeared, for the first poem, in this collection was published in 1779, by Thorkelin: we shall give a short account of the subject of some of the poems in this volume, as a specimen of the rest.

The first is styled Vafthrudnir. Odin under the name of Gangradt, goes to this giant to try his wisdom, for he was reputed to be very able, and intelligent. They puzzle each other with intricate questions, about the state of the world, till the giant discovers the Deity, and is greatly terrified.

In the Grimnis mal, Odin describes the habitations of the Gods, and explains the religious mythology. The For Skirnis, the journey of Skirnis, whose object was to obtain the love of Gerda for Freyer. The Harbarz Lioth is a kind of Billingsgate abuse between Odin and Thor. In the Hymis Quida, Thor is described as going to kill a vast serpent. Ogesdreeka contains a reproof to the Gods, by Lok.

The glossary, the various readings, and the notes, are very
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curious, in many respects; we are greatly indebted to the society for publishing Danish manuscripts, and hope to receive the various treasures of Iceland, with a dispatch consistent with the accuracy and attention which distinguish this valuable volume.

Since writing the above, we have been informed that the poems which the present editor has omitted, are designed for a separate publication.

MONTHLY CATALOGUE.

POLITICAL.

A Letter to the Chancellor of the Exchequer, shewing the Necessity of a Clerical Reform; and containing a Plan for remedying the Grievances of the inferior Clergy. By Mr. Warburton. 8vo. 1s. 6d. Nicoll.

WE fully agree with our author, in censuring the misconduct of some rectors, and regretting the slender stipends of some curates; but it is no less unjust to imply, that every curate is distressed, than that every pluralist is luxurious or vicious. In reality, while a reform is supposed to be necessary, it is not a general one that is required; and every reformation must be attempted with the most prudent and steady hand. Mr. Warburton's remarks are, in general, very just; and his proposal, with some few exceptions might, perhaps with great propriety, be adopted.

A Summary View of the Objects and beneficial Provisions in Mr. Gilbert's New Bill. 8vo. 1s. Debrett.

The bill is now lost, and our time would also be lost in a very minute discussion of it. Some of the provisions are, however, so truly beneficial, that we wish for its re-appearance; and as Mr. Gilbert must have seen the rock on which he split, we hope it will be revived with better success.

The Insufficiency of the Causes to which the Increase of our Poor, and of the Poor's Rates have been commonly ascribed; the true one stated; with an Enquiry into the Mortality of Country Houses of Industry, and a slight general View of Mr. Acland's Plan for rendering the Poor independent. By the rev. J. Howlett. 8vo. 2s. Richardson.

Mr. Howlett, in opposition to many authors, thinks that the increase of the poor is not owing to any defects in the laws, or their execution; to the number of ale-houses; the profligacy and wickedness of the poor; the engrossing of farms, or the absorption of larger farms into smaller ones. For many of these opinions, he has given very satisfactory reasons; yet we think he has not examined the subject on a very large or very extensive scale. His remarks are confined to the labouring poor, and are very correct, so far as that application holds: among the manufacturers, profligacy and luxury are too com-

mon;

mon; and so far as our experience reaches, the great increase of the expences of the poor, above what must arise from the increase of people, is owing to the manufacturers who are decayed or diseased. This fact should be settled before we can examine the causes which he assigns for the increase of the poor, viz. that the price of labour has not advanced in proportion to the price of provisions. This affects the labourer only, not the mechanic or the manufacturer. It may, and we believe is one cause; but it is not the only or the most extensive one.

In the third part, he examines the plans which have been proposed for the reduction of the expences; and, if his cause is well founded, it must be obvious, that no one plan hitherto mentioned can effect the cure. We suspect that, in some respects, Mr. Acland's plan, and, in some, Mr. Gilbert's plan, might have been useful; yet, if the cause is not a single one, no single plan can counteract the effects. If the poor, in the moments of health and industry, cannot raise a fund for themselves, some law is requisite, which shall punish those who have passed many of these moments in idleness, instead of labour, and have squandered their pittance instead of saving it. At least, some regulation is requisite; and the evil is now so big with ruin, that some trial should be made soon. In this pamphlet, however, Mr. Howlett displays his usual sagacity, and his extensive information.

Political Observations on the present State of Europe. 8vo. 1s. 6d. Baldwin.

This pamphlet exhibits a very imperfect account of the present state of Europe, and is written in a style extremely perplexed and obscure.

A Letter to the Minority in the House of Commons, who voted in favour of a Motion for a Repeal of the Shop-Tax. 8vo. 1s. Debrett.

The author of this Letter, who subscribes himself a shop-keeper, expresses his gratitude to the members of the house of commons, who voted for a repeal of the shop-tax, and urges many arguments in support of the assertion that the tax is partial and oppressive.

Familiar Expostulations, addressed to Messrs. Pitt and Thurlow. 8vo. 1s. 6d. Ridgway.

The chief object of this pamphlet is the impress of seamen, concerning which practice the author expostulates with two members of the cabinet, with such a familiarity as may, indeed, evince his zeal, but never can promote an alteration in that obnoxious part of our polity.

Joseph and Benjamin. A Conversation. Small 8vo. 3s. Murray.

The effusion of some inexperienced writer, who retails his own conceptions in the characters of personages which he does not support with consistency.

The Form of Trial of Commencers, in Cases of Imprachment for High Crimes and Misdemeanors. Folio. 3s. Forbes.

The writer of this pamphlet sets out with giving a brief account of the mode of conducting trials by impeachment; after which he presents us with an abridgement of Mr. Hastings's trial, from its commencement to the 29th of February.

Reflections upon a late extraordinary Promotion of sixteen Admirals. 8vo. 1s. Murray.

The late promotion of admirals afforded subject for some motions in parliament; which ended, however, without fixing any blame on the conduct of the first lord of the admiralty. But his lordship has not escaped the severe, though unavailing reprehension of this writer.

A Letter to the Duke of Grafton. 8vo. 1s. Rivingtons.

This Letter relates to the bill now depending in parliament for preventing the exportation of live sheep, wool, &c. The author, who appears to be an intelligent person, has no objection to the principle of the bill; but points out some clauses which he thinks would prove oppressive to individuals, and wishes that they may be either left out, or so modified as to render them less obnoxious.

The Question of Wool truly stated. 8vo. 6d. Nicoll.

On a subject concerning which two numerous classes of people are variously interested, it requires the most accurate statement of facts, to ascertain the truth amidst the misrepresentations, intended or not intended, of the different parties. The woollen manufacturers complain of a declension of their trade, in consequence of a large smuggled exportation of that valuable commodity to France. The wool-growers, on the other hand, insist that the manufacturers are at present in a very prosperous condition; and represent the exportation of wool to France, both as trifling in quantity, and unnecessary for the fabrics of that country. The author now before us is evidently one of the latter class. The facts which he states have doubtless been considered by the house of commons, previous to the passing of the bill; and there is no question but the claims of both parties will likewise receive due investigation in the house of lords. To the determination of the legislature we shall, for the present, leave the subject.

Observations upon the Bill presented to Parliament, for preventing the Exportation of Wool. 8vo. 1s. Law.

The exportation of wool is a practice extremely pernicious to the kingdom, both as lessening the quantity of our own woollen manufactures, and increasing that of the French. Express prohibitions have been repeatedly issued against it by the parliament; but the evil still subsists, in such a degree as calls for the most diligent exertion of government. The chief remedy proposed by the author of this pamphlet is, to employ
riding

riding officers, who shall make it their business to ride from place to place through their respective districts, within fifteen miles of the sea; distribute, and make generally known, concise abstracts of the law, and offer encouragement, protection, and rewards to informers, upon conviction of offenders.

A Speech on the Wool Bill that might have been spoken in the House of Commons. 8vo. 6d. Nicoll.

The writer of this pamphlet is a zealous opponent of the bill for prohibiting exportation. He affirms that the true principle of it is to depreciate the price, under the pretence of preventing a practice which no longer exists. The author, though not very minute in enquiry, is sufficiently bold in assertion.

D I V I N I T Y.

A Sermon, written by the late Samuel Johnson, L.L.D. for the Funeral of his Wife. 8vo. 1s. Cadell.

This is, in many respects, an admirable discourse: it displays a pure, unaffected piety, little tinged with the native, the constitutional gloom which hung over the author's mind. The opinions and the ideas are exact and discriminated, and the language has all Johnson's energy and vigour, without his peculiarities. If tradition has not conveyed to us the excellencies of Mrs. Johnson, this sermon shows us that she possessed some, or that her husband thought she did. From his character, we ought to conclude, that these were his sentiments at that time, though it may be allowed that, in the period of mourning for a recent loss, the value of good qualities is often enhanced. It has been said, that Mr. Hayes, to whom this Sermon devolved on the death of Dr. Taylor, has some more discourses by the same author. He cannot bestow a more acceptable present on the world, than to publish them. We shall extract a specimen, at once rational and manly, on a subject where Johnson occasionally appeared superstitiously weak.

But, so much is our condition improved by the Gospel, so much is the sting of death rebated, that we may now be invited to the contemplation of our mortality, as to a pleasing employment of the mind, to an exercise delightful and recreative, not only when calamity and persecution drive us out from the assemblies of men, and sorrow and woe represent the grave as a refuge and an asylum, but even in the hours of the highest earthly prosperity, when our cup is full, and when we have laid up stores for ourselves; for, in him who believes the promise of the Saviour of the world, it can cause no disturbance to remember, that this night his soul may be required of him; and he who suffers one of the sharpest evils which this life can shew, amidst all its varieties of misery; he that has lately been separated from the person whom a long participation of good and evil had endeared to him; he who has seen kindness snatched from his arms, and fidelity torn from his bosom; he whose ear is no more to be delighted with tender instruction, and whose virtue shall be no more awakened by the seasonable

whispers of mild reproof, may yet look, without horror, on the tomb which encloses the remains of what he loved and honoured: as upon a place which, if it revives the sense of his loss, may calm him with the hope of that state in which there shall be no more grief or separation.

Practical Sermons selected and abridged from various Authors. By J. Charlesworth, M. A. late Fellow of Trinity College, Cambridge. Vol. I. 8vo. 2s. 6d. Johnson.

This is confessedly, in a great degree, a compilation, for but a small proportion of these discourses are the compiler's own. We shall not stay to look for the authors: they may perhaps be found in Cook's Preacher's Assistant, as none are collected, in this volume, which were published since that very useful book came out.—Neither shall we stay to ask, for what reason these Sermons were republished. They are plain, devout, practical; and we cannot read discourses of this description too often. The collection will probably be continued, since this is called the first volume.

Sunday School Dialogues: being an Abridgment of a Work, by M. P. 12mo. 3d. Marshall.

This is an abridgment of a very useful little work; yet, while we praise the attempt, we cannot avoid hinting that it is easy to be too familiar. It leads sometimes into discussions almost ludicrous; and by endeavouring to explain what in its nature is incapable of explanation, it may in some minds lead to scepticism rather than religion.

A Desultory Tract. 12mo. 4d. Scatchard.

This Tract consists of a project for reforming the disorderly, and assisting the indolent and orderly poor. The author makes one remark with respect to Sunday-school teaching which deserves particular attention, viz. 'that it will be of little efficacy till the parents of the children become better.' This hint suggests the propriety of reforming the elder as well as instructing the younger poor.

AFRICAN SLAVE TRADE.

An Account of the Slave Trade on the Coast of Africa. By Alexander Falconbridge. 8vo. 9d. Phillips.

This Account is full of the barbarities with which the slaves are treated; but the picture is too highly coloured, and the exaggerations defeat the author's own purpose. He remarks, and we believe it to be true, that the cargoes are generally obtained by kidnapping, or condemned to slavery for offences, sometimes real, but more frequently fabricated, to procure the slave. In other respects, the trade is the grave rather than the nursery of seamen, as scarcely any landmen, and no apprentices, are taken. On the whole, though this account contains some facts of importance, the general tenor of it leads us to suspect that it was written with some partial views. It would not be very difficult to soften some of the colours, from the author's own remarks.

Objec-

Objections to the Abolition of the Slave Trade, with Answers. By the Rev. James Ramsay, A. M. 8vo. 9d. Phillips.

The various objections which have been made to the abolition of the slave-trade, are shortly noticed, and answered with various success; but not always very satisfactorily. — We cannot abridge matter so miscellaneous; but shall select a striking passage from the introduction, which contains an answer to a late publication, entitled, *Considerations on the Emancipation of Negroes, and the Abolition of the Slave Trade, by a West India Planter.*

— The abolition of the slave trade will ruin the West Indian trade, which will ruin our marine. I trust the West Indian trade is in no danger. But suppose the one annihilates the other. We shall, by abandoning the slave-trade, save more seamen than the other employs. The African slave-trade destroys annually 2000 men; in ten years 20,000. The sugar colonies may employ 12,000 seamen. The loss here is 3 in 200. Suppose annually 200, in ten years 2000. The whole number of men employed in the West India trade in ten years, is 14,000. But in this time 20,000 are lost in the slave-trade. If both were annihilated, in ten years we should save 6000 men.

We give this fact as we found it, without a comment; we shall not enter into the propriety or justness of the calculation, but leave it with valeat quantum valere potest.

Thoughts on the Slavery of the Negroes, as it affects the British Colonies in the West Indies, humbly submitted to the Consideration of both Houses of Parliament. 8vo. 1s. Richardson.

There is much candour in the representations of this author, though there appears to be some bias in favour of the slave-trade. He magnifies, we think, the political despotism to which the Africans are subjected, and extenuates the calamities to which they are afterwards exposed. Slaves, he says, are seldom kidnapped, and the prisoners taken in war, if they are enslaved, are saved from death. As we have professed that we wish only to preserve them from improper treatment; and as, in part, our author's proposed regulations will produce this effect, we do not greatly differ from him. But he will allow us to doubt, whether the laws in favour of slaves are a sufficient protection for them, while the administration of these laws is in the hands of their masters. Again; the free negroes are indolent, and thievish, they are the pests of the colonies; what then must be the terrors that drive them to labour?

An Essay on the Slavery and Commerce of the Human Species, particularly the African. Translated from a Latin Dissertation, which was honoured with the first prize in the University of Cambridge, for the Year 1785. The Second Edition, revised and considerably enlarged. 8vo. 4s. Phillips.

We reviewed this excellent treatise in our LXIIId volume, page 121. at some length; and now announce, with much

pleasure, the second edition, with some important additions and necessary alterations. The author resided, during the last summer, at two of the slave-ports in this kingdom, for the purpose of procuring information; and he has added two new chapters, which contain the state of the trade at this time. In the third part, the chapter which relates to the treatment of the slaves on board of the ships destined to carry them to the American islands, is extended to three chapters, in order to give a clearer view of the subject, and to convey more circumstantial information.

Mr. Clarkson promises, that this edition shall be soon followed by another Essay, in which he designs to show, that the slave-trade is as impolitic as it is unjust. After so extensive an account as we gave of the first edition, we need not add any other particulars of this which lies before us; especially since the new chapters, though the narrative be more clear and circumstantial, do not materially differ from the information which we have received from other hands.

Letter to the Treasurer of the Society instituted for the Purpose of effecting the Abolition of the Slave Trade. From the Rev. Robert Boucher Nickolls, Dean of Middleham. A new Edition with considerable Additions. Small 8vo. 4d. Phillips.

The second edition of this Letter contains a variety of additional facts, and a confirmation of some of the former remarks. The facts, well supported, are the very important ones that, by proper care, the race of negroes from the present stock may be increased sufficiently to answer all the exigencies of extended plantations; and that from the labour of free men, sugar might be raised sufficient to supply any demand. But for the last consideration, circumstances are not sufficiently matured; and the abolition of importation, though we have recommended it, cannot, we fear, be yet adopted consistently with national faith and real justice. We wish, however, that the planters would act as if this measure impended over them; for it must, at some future period, be put in execution.

P O E T R Y.

Brother Peter to Brother Tom. An Expostulatory Epistle. By Peter Pindar, Esq. 4to. 3s. Kearsley.

The sun of Peter seems declining in the west; and though it sets with a glowing splendor, yet it wants the vivid fire of its meridian beams. He expostulates with brother Tom, on his confining all the panegyric of the last year's Ode to Windsor, and omitting to celebrate the virtues of his majesty. Peter once likened himself to the cook, who 'dished up royalty,' and perhaps he expected that Tom should supply the garnish. In the present instance, the subject 'palls on the sense'—*toujours perdrix ne vaut rien*. We shall, however, according to our good custom, extract a few lines, and let this son of genuine wit and real humour speak for himself. We shall select the following, to remark, that however excellent Handel may be,

to confine the national attention to one composer, is surely granting an unfair 'monopoly of fame'—Why should I, says Peter,

'Hate him, because, untir'd, the monarch pores
On Handel's manuscript old scores,
And schemes successful daily hatches,
For saving notes o'erwhelm'd with scratches;
Recovering from the blotted leaves
Huge cart-horse minims, dromedary breves;
Thus saving damned bars from just damnation,
By way of bright'ning Handel's reputation?
Who, charm'd with ev'ry crotchet Handel wrote,
Heav'd into Tot'nam street each heavy note:
And forcing on the house the tuneless lumber,
Drove half to doors, the other half to slumber?'

The following simile concludes Peter's expostulation on a similar exclusive attention to Mr. West.

'Thus have I seen a child with smiling face,
A little daisy in the garden place,
And strut in triumph round its fav'rite flow'r:
Gaze on the leaves with infant admiration,
Thinking the flow'r the finest in the nation,
Then pay a visit to it ev'ry hour:
Lugging the warr'ring pot about,
Which John the gard'ner was oblig'd to fill;
The child, so pleas'd, would pour the water out,
To show its marvellous gard'ning skill;
Then staring round, all wild for praises panting,
Tell all the world it was its own sweet planting;
And boast away, too happy elf,
How that it found the daisy all, itself!'

This simile is, in many respects, excellent; and indeed Peter, with all thy faults, we seldom leave thee but in good humour: we wish that thou wouldest change thy subject, if it be only for the sake of a little variety. There are, however, better motives for the advice.

The Eastern Theatre erected. An Heroi-comic Poem. In three Cantos. 4to. 2s. 6d. Brown.

The author describes the origin of the Eastern Theatre; but its downfall must be sung by another poet. There is some comic humour, and entertaining description, in this little poem; but the burlesque gravity of the mock heroic is not sufficiently preserved. The merit of this kind of composition consists in giving to the most trifling circumstances an air of dignity, by adopting epic images, similes, and language. There is nothing personal in the satire; it is general, and pointed rather at folly than at any individual.

One of the best passages of this poem is the description and speech of the spectre Davies; some just remarks occur also on
dramatic

dramatic poets and plays. As the former is too long for our purpose, we shall select a specimen from the latter.

' While wits and wittings, round, our praise affect,
Say, shall the muse her fav'rite H — e neglect?
Step forth, great tragic bard, whose wond'rous verse
Flow'd on, from good to bad, from bad to worse;
Whose fame, (thy brains still yielding something new,)
Like thy own Scotch fir, taper'd as it grew
Guard thou that fir, whose Douglas-base extends,
Grows *gradual slight*, and in an Alfred ends.'

The lines are unequal; but they are sometimes spirited and poetical.

The Parriad; addressed to the Editor of Bellendene, upon his elegant, but illiberal Preface. By W. Chapman, A. M. 4to. 1s. 6d. Bew.

Mr. Chapman reprehends the editor of Bellendenus for the virulence, and often the injustice of the political opinions, in the preface. We have already given our opinion on this subject, and need now only add, that Mr. Chapman's poetry sometimes rises above mediocrity. We shall quote a few lines relating to Mr. Pit: the *ô diſſa* of the author of the preface:

' Should in the crowd *ô diſſa*'s praise be heard,
Who dar'd be wise before he had a beard (a);
Tho' young, declin'd not pow'r (destructive choice)
Fix'd only by the king's and people's voice (b):
Who broke the promise of his early day,
When from a factious crew he forc'd his way,
And, poor of spirit, scorn'd to join that band (c),
Which having injur'd, sought t' enslave the land;
Who can unblushing in the senate rise (d),
And while he charms our ears, engage our eyes (e);
We would, should S***** receive his praise,
Find fear or art in ev'ry word he says (f):
Attack, with thee, his unrelenting pride
With thee, his boyish politics deride;
(Time rolls o'er him his rapid tide in vain,
For still, a boy *ô diſſa* shall remain)
Tell, how, should war the languid state alarm,
Our timid minister would fear to arm (g);
No longer boastful, insolent, and proud,
Would view with tearful eye the bursting cloud;
Obsequious bend before the daring foe,
And yield his country up without a blow.'

(a) Pag. 18.

(b) Pag. 62.

(c) Pag. 61.

(d) Pag. 43.

(e) Pag. 27.

(f) Pag. 18.

(g) Pag. 22.

A Letter to a Friend, with a Poem, called the Ghost of Werter.
By Lady ———. 4to. 1s. 6d. Hookham.

In this Letter the character of Charlotte is minutely investigated, and an attempt made to shew that she was 'vain, unfeeling, and ungenerous.' The fair author, seems, indeed, to entertain an implacable aversion to her, and wrecks some of her indifferent actions to a meaning that cannot with candour be attributed to them. Yet some of her remarks are extremely just, and where they do not convince, will please from their shrewdness and the spirited manner in which they are written. We cannot speak so favourably of the poetry as of the prose.

The Odiad; or, The Battle of Humphries and Mendoza; an Heroic Poem. 8vo. 1s. 6d. Lowndes and Christie.

It would have been indeed unfortunate, if the victory of Humphries and the prowess of Mendoza had been celebrated only in the fugitive sheet of the day, or been at best preserved with the precious rarities of a monthly magazine. The Odiad is an heroic poem; and, though not the first in which the combat of the castus has been celebrated, it is the first * where the modern contests of fists alone are the subjects of the lofty rhyme.—It is enough to say, that the poem is worthy of the celebrity of the battle; and that the poet might, like Simonides, be allowed the title of laureat of the games. We shall extract a short specimen, no unfavourable one, of the poet's abilities. The alliterations, which the author seems to be sometimes fond of, and one couplet, which is in the true style of the mock heroic, we have distinguished.

'Say, muse, what first provok'd th' indignant foes
To clinch the fist, and brave each others blows;
For glory—Pella's hair-brain'd madman fought,
For glory and proud triumphs—Cæsar thought;
Grim Jews and Christians bant alike for fame,
In faith still adverse, but in pride the same.

What tho' no cannons thunder in my line,
Nor chiefs that glory in their stem divine;
Nor whizzing darts, nor clanging shields you hear,
Nor glitt'ring blades, nor waving plumes appear;
Dire are the scenes—the fist by fist repell'd,
Black eyes black'd up, and into mountains swell'd;
'The shatter'd rib—the nose's broken bridge,
'The head whose bumps portrude in many a ridge;
Dissever'd lips, whilst rattling teeth around,
Driv'n from distorted jaws bestrew the ground;
Dry drubs and hollow bangs resounds my song,
Thwack follows thwack, and man drives man along.

We are not so well pleased with the author's prose as with his poetry. To add a prefatory dissertation is a little contra-

* Since this article was written, we recollect, though imperfectly, a piece of P. Whitehead's on the same subject, 'The Gymnasiad.'

dictory; and the bull threatens, with his destructive horns, in the title-page. In this said subsequent dissertation, which comes before, we find some things which appear either like errors or blunders. 'If the author is not mistaken, some poetry has been employed in the celebration of this art.' Indeed, much very sublime poetry has arisen from the games of Greece, in which boxing held a distinguished rank. We cannot, however, style the wreathes of laurel, &c. given to the conquerors, as instances of 'munificent profusion.'—'The coldness and obscurity of birth-day odes,' or 'the jejuneness and poverty of genius in the laurelled lyric' should now be no longer heard. It is hackneyed satire at best, and it is at present an unjust accusation. There is humour in proposing that all political and national contests should be determined by boxing; but this ground has been already occupied, with much success, by Fielding.

The Battle Royal, or the Effects of Anticipation: with Strictures on the Odiad, or Battle of Humphries and Mendoza; an heroic Poem. 8vo. 1s. 6d. Symonds.

This pamphlet is filled with quotations, letters from newspapers, &c.—for the purpose of deriving every advantage from the cynthia of the minute. The author possesses some humour, and we wish that it had been better employed.

D R A M A T I C.

The Ton; or, Follies of Fashion. A Comedy. As it was acted at the Theatre-Royal, Covent Garden. By Lady Wallace. 8vo, 1s. 6d. Hookham.

That Criticism has smoothed his brows, and laid aside his severity, when a lady sues at his tribunal, confers more honour on his tenderness than his justice, and may add to his character as a gallant, at the expence of his impartiality. In reality, a literary woman is an Amazon, whom it is no disgrace to oppose in the field; for, when she assumes martial weapons, she must submit to the laws of war. Lady Wallace has, however, a claim to our compassion: she has been condemned unheard, or at least has been heard imperfectly; and, while we would soften, if it were possible, the severity of the critical code, in favour of a lady, and an unfortunate one, we cannot silence the hisses of the theatre, nor can we condemn, on cool examination, the verdict of her jury.

The male coquettes have a powerful party in their favour, for not one satire, and we remember several attempts, on their follies, has been permitted to live on the stage. Lady Wallace had, perhaps, too much courage to be frightened with the spectres of murdered embryos, or she had too much dependence on her own comic powers, and extensive interest. Another rock, which proved fatal to her bark, was her own reputation. Wit was expected to flash in every line; every thought was to be

be brilliant, and every situation truly comic. A sprightly play would have fallen short of expectations, which were raised very high; and, unfortunately, spirit and wit have but a small share in this comedy. Genteel comedy, at best, wants poignancy; the polish of fashion wears away the distinguishing asperities; and the Follies of Fashion are often insipid, except to those who feel the force of the satire. One party will consequently yawn, and the other oppose.

If we were to examine this play critically, we should observe, that the conversations were too numerous in proportion to the incidents; that they had little influence on the events, and often were not connected with them; that time was frequently violated; and that the most comic situations had lost their influence, from familiarity. We ought, however, to add, that the characters of the fashionable people, though seemingly of the same kind, were well discriminated, and, in one or two instances, strongly contrasted; that the tale of Julia, the Fanny Mountfort of a novel, whose particular title we do not recollect, is interesting; that the character of Lord Ormond (the lord Ossory of the work just mentioned) is drawn with spirit and skill; that the incidents are numerous, and the conversation, though not sprightly, at least free from indelicacy, with which it has been charged. The two plots, indeed, are not dextrously united, so as to form one piece.

Lady Wallace must excuse us for observing, that her play has too many defects to be admitted on the stage. Yet she has been peculiarly unfortunate, that, in consequence of the clamour raised against it, she has been prevented from taking advantage of judicious criticism. Many plays, on their first appearance, have been found to be defective, which have been afterwards amended with good success. She should remember, that from the days of Horace, the vulgus, we suppose he meant, in modern language THE TOWN, though it, in a few instances, errs in judgment, generally decides with justice. The public is a many-headed, and often a capricious monster; but all its efforts seldom defeat the success of a truly good play. The utmost that party can do, is to exaggerate the real errors, so that they may hide the beauties.

The Travellers. A Comedy, in three Acts. By Lieutenant Harrison, Marines. 8vo. 1s. 6d. Robinson.

This play has been read, it seems, with success; but we dare not recommend its trial on the stage. The plot of two fortune-hunters, and a stupid or a ridiculous relation, failing in their matrimonial attempts, and the lady being carried off by a half-pay officer, is far too trite to prove interesting; and the scientific wit, relating to Fossil, and a pretending tutor, by its being beyond the reach of common understandings, is not likely to please. Yet the author possesses a good share of comic humour, and may, with any other story, probably prove a successful wooer of the dramatic Muse.

*Clarissa: or, the Fatal Seduction. A Tragedy. By Robert Port-
ret. 8vo. 5s. Lowndes.*

This Tragedy is drawn, with little alteration, from Richardson's celebrated novel. The story of the robbers, who capture Lovelace and Clarissa, on their elopement, as well as young Harlowe and Arabella, is new: the last are murdered by the Banditti, who are brought in to heighten the character of Clarissa, and to be the executors of poetical justice. The subject is, however, in many respects improper for a play, since the catastrophe is known; and events, which follow in long succession, cannot be so artfully combined, as to form a whole, within a proper compass*. These are chiefly the reasons, why our best novels never succeed in a dramatic form. The conduct of this tragedy is, in many other respects, exceptionable; and *Clarissa* is a very indifferent, as well as an uninteresting performance.

Theatrical Remembrancer. 12mo. 3s. 6d. Boards. Egerton.

The *Theatrical Remembrancer* is a very convenient, and, so far as we can perceive, a very correct little work, in a portable form. It owes its birth to Mr. Egerton, who arranged the libraries, rich in dramatic collections, of Mr. Henderson, Dr. Wright, and Mr. Pearson. It contains a list of plays, Latin and English, as well as translations from the French, which have either been published, or acted. To the titles is annexed an account of their dates, their sizes, their various editions, and the places where they were performed. The *Notitia Dramatica* is a short chronology of the æras of the stage; and it concludes with the opening of the Royalty Theatre. The work is also illustrated with an index of the titles of the plays, and another of the author's names. The whole appears to be executed with great care and attention. The only errors, which we have discovered are, in one or two instances, where the original author of a French play is mistaken.

MISCELLANEOUS.

The Wreck of Westminster Abbey, alias the Year Two Thousand, alias the Ordeal of Sepulchral Candour. 4to. 2s. 6d. Stalker.

Avaunt, perturbed spirit, who erst wrote epitaphs for Kilkhampton Abbey! and now, with equal virulence, decoratest the walls of that of Westminster, with the fatal poison of slander, or still more destructive drug of flattery!

Avaunt! and quit our sight; let the earth hide thee,

Thy bones are marrowless, thy blood is cold,

Thou hast no speculation in those eyes

Which thou dost glare with — Why so? being gone

We are ourselves again.

* The historical plays of Shakspeare form no exception to these reasons, for their principal merit arises from the excellence of particular scenes, and the bold originality of the language.

Sense.

Sense against Sound; or, a Succedaneum, for Abbey Musick. 4to. 2s. Stalker.

We were pleased with the title; but in the work we found neither sense nor sound. It is an unmeaning rhapsody, by a clergyman's widow, of the various misfortunes that will arise from the omission of the musical festival, which is not to be omitted.

The Quip Modest; a few Words by way of Supplement to Remarks, critical and illustrative, on the Text and Notes of the last Edition of Shakspeare. 8vo. 1s. Johnson.

This is, indeed, somewhat beyond the retort courteous, and rather borders on the reply churlish. We examined the 'Remarks' in our LVith volume, p. 81. and have unfortunately drawn down upon us the resentment of the author. We are noticed, in a few lines, but they contain heavy charges: 'we do not read the books which we review'—alas! we read too much, for we caught the author tripping, and noticed his thefts. 'We go to meeting,'—is this because we reprov'd his inndelity? And are only the dissenters licenced to check immorality? We hope that we may be allowed to have the same pretensions. Even the last corrected edition of Shakspeare is incorrect: in ten volumes there are twenty errors actually pointed out, besides &c. &c. which allude, we suppose, to others which may be found. Why, there are eighteen acknowledged errors in one thin volume of the Remarks, and we can add our, &c.—The proportion of incorrectness we leave Mr. J. R. to calculate. We do not succeed much better in the course of the notes. It is supposed that we know the reason of affixing the names of Amner and Collins to some exceptionable notes. Indeed we knew more than we chose to own; we know too, that the principles and conduct of our author are, in very many instances, highly reprehensible. The substance of the pamphlet consists chiefly of answers to the objections which have been made to the Remarks, and particularly to Mr. Tyrwynytt.

The King on the Prosecution of R. B. Remmett, Doctor of Physic, against A. Archer, Esq. Folio. 2s. Law.

We cannot again try this prosecution. Mr. Archer assaulted Dr. Remmett, and was punished for it by the Court of King's Bench; and it would be indecent to make any remarks on the decision of that court. We have perused the affidavits which were not permitted to be read; but we do not perceive that they make any considerable alteration in the question.

Picturesque Antiquities of Scotland, etched by Adam de Cardonnel. 2 Vols. 8vo. 18s. in Boards. Edwards.

These remains are etched in a very elegant manner, and serve as head-pieces to the page, in the same way as Mr. Gose's antiquities were published. The first volume contains the religious houses, and the second the ancient castles. To each a suitable introduction is prefixed: in the Introduction to the first volume, the state of religion is examined, from the earliest periods; the constitution of the primitive church explained, till

it blazed in all the splendor of an hierarchy, and was separated into different orders of monks and friars. Of some of the objects there are two or three representations, in different views; and the history is consequently divided into different pages. As a specimen of our author's manner, we shall select a part of the history of Inch-Colm.

'This monastery had considerable wealth, which, attracting the notice of the English fleet sent into the Frith by king Edward III. anno 1335, was pillaged of every thing valuable. Amongst the spoils was an image of St. Columba, held in great veneration. Soon after this act of sacrilege, the fleet suffered much by a violent tempest, which being considered as a just punishment inflicted by the hand of the Deity for the impious deed, those who had escaped the fury of the waves were so intimidated thereat, that the church and monastery were presented with a valuable offering of gold and silver.

'Alanus de Mortuo Mari, lord of Aberdour, bestowed half of his lands on the monks of this island, in consideration of his being allowed a burying-place for himself and his posterity in the church.

'This island now belongs to the earl of Murray, whose beautiful seat of Dunbrissel lies a very little further up the Frith, upon the edge of the water.'

As an introduction to the second volume, some account is given of the structure of the ancient castles, and particularly of the vitrified walls, of which a description was published some years since. The explanation, which is suggested of the process, is not, however, very satisfactory, since fuel cannot burn so fiercely as to vitrify the pudding-stone, without a constant supply of a stream of air, *through* the fire. The plates and the descriptions resemble those of the first volume. On the whole, these are elegant little volumes, very beautifully printed, on good paper, well calculated for the pockets of the traveller, and very useful assistants to him.

Universal History, commencing with the Creation, and ending 536 Years before the Christian Era. In Letters from a Father to his Son. By Francis Dobbs, Esq. Vol. I. 12mo. 3s. sewed. Kearsley.

This work is to consist of four volumes, which will be printed if this be favourably received. The first volume terminates at the 356th year before the Christian æra. This is the age of fabulous history, and of course it cannot afford a very proper specimen of the historian's abilities. On the whole, we think Mr. Dobbs has acquitted himself very well: the narrative is clear; the dates well ascertained; and there is less trifling in it than we could have expected. The chronology is that of sir Isaac Newton. We would recommend the future volumes to be illustrated with small and distinctly marked maps: we mean that they should exhibit the principal countries, and show their general size and connection, without crowding them with the names of too many cities.